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Economic Analysis of Labor and Employment Law in the New Economy: Proceedings of the 2008 Annual Meeting, Association of American Law Schools, Section on Law and Economics

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ECONOMIC ANALYSIS OF LABOR AND EMPLOYMENT LAW IN THE NEW ECONOMY: PROCEEDINGS OF THE 2008 ANNUAL MEETING, ASSOCIATION OF AMERICAN LAW SCHOOLS, SECTION ON LAW AND ECONOMICS

Professor Kenneth G. Dau-Schmidt[*]**:** I am Ken Dau-Schmidt from Indiana University-Bloomington, and chair of the American Association of Law Schools' Law and Economics Section. A topic on all of our minds is the economic analysis of the labor and employment law in the new global economy. We will have several knowledgeable speakers address this subject today. I tried to cover the full breadth of this topic in the little time we have. We have Alan Hyde of Rutgers University who is going to speak about high tech workers. Alan wrote a very interesting and useful book on the subject, *Working in Silicon* Valley.[1] Michael Risch, from West Virginia University, will be commenting on Alan's presentation. After that we will have a presentation by Jagdeep Bhandari from Florida Coastal University on low tech workers and issues relating to immigration in the global economy. The commentator for Jagdeep's presentation will be Ruben Garcia, from California Western. Finally, Richard Block, who is in the Industrial Relations Program at Michigan State University, will talk about the economic analysis of international labor regulation. Orly Lobel, from the University of San Diego, will be the commentator for Richard's paper.

Professor Alan Hyde[**]**:** For some time and for a number of reasons, I have been interested in the analysis of legal and economic issues related to workers who change jobs very frequently. It's a new way of working, but is very much a challenge to dominant economic ways of thinking about and modeling the employment relationship.

I am going to update a book I wrote on this that came out in 2003.[2] One of the agendas of that book was to challenge the dominant economic way of thinking about employment relationships that had become extremely influential in the law school community in the late 1980s and

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1. ALAN HYDE, WORKING IN SILICON VALLEY: ECONOMIC AND LEGAL ANALYSIS OF A HIGH-VELOCITY LABOR MARKET (2003).

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2. HYDE, *supra* note 1.

early 1990s. Under that view, what was distinctively interesting about employment contracts was that they lasted a long time, they had a predictable profile, and they were full of implicit promises.[3] None of that is wrong; there are plenty of those employment relationships in the world. It was never part of my argument that those were obsolete or were going to disappear, or that they had no place in the new economy. It seemed to me that what I was studying was intrinsically interesting, even if it was only 5, 10 or 20 percent of the workforce. But I knew from my own experience, and it was brought home to many of us when AnnaLee Saxenian published a great book on Silicon Valley in 1994,[4] that there were indeed other ways of working, and those were not very well understood either in economics or in the law. Many issues could be raised about people who change jobs all the time, but the one I was particularly interested in and will limit my remarks to today is the role of these workers in transmitting knowledge.

One of the most interesting things about workers who change jobs all the time, particularly in technology, was the role they play in carrying information around. There is an important public interest in the dissemination of this information. Indeed, there is a strong connection between a highly mobile workforce unimpeded in its mobility, unimpeded by doctrines like an excessively strong duty of loyalty, covenants not to compete, or trade secret law, and the spread of technological information. This mobility of information has become more acceptable the last few years, but was definitely a challenge to the more conventional ways of thinking about the issue.

The usual corporate litigation posture is that to have a strong technology sector, you must have strong duties of loyalty and strong trade secret law to protect information, to exclude it from others. The traditional position was that companies will not invest in the production of valuable information unless they can exclude others from getting it at least for a period of time. I just didn't think that was true. But the traditional position, that strong employer protections were the best public policy, was a problem. I started looking for economics that I could take to contested legal cases. And the legal issue is not settled, either. This comes up every day. You read pretty outrageous cases restricting employee mobility that stem

3. *E.g.*, Samuel Issacharoff, *Contracting For Employment: The Limited Return of the Common Law*, 74 TEX. L. REV. 1783 (1996); Marleen A. O'Connor, *Restructuring the Corporation's Nexus of Contracts: Recognizing a Fiduciary Duty to Protect Displaced Workers*, 69 N.C. L. REV. 1189 (1991), Sherwin Rosen, *Implicit Contracts: A Survey*, 23 J. ECON. LITERATURE 1144 (1985). Stewart J. Schwab, *Life-Cycle Justice: Accommodating Just Cause and Employment At Will*, 92 MICH. L. REV. 8 (1993).

4. ANNALEE SAXENIAN, REGIONAL ADVANTAGE: CULTURE AND COMPETITION IN SILICON VALLEY AND ROUTE 128 (1994).

from the traditional position that, as most economic analysis had it, the information could have value only if it was somebody's property.[5] I was surprised how little economic analysis there was when I started this research – there is a little bit more now, as you will see – that made any attempt to model the value of information if it wasn't anybody's property, which is exactly what interested me.

So, in the course of doing that book in 2003, I had to assume that some firms, and in particular if your unit of analysis is networks of firms, can obtain unusual technological and economic growth when information is shared. There is certainly a public interest in not impeding this growth. Employee mobility seems obviously to be one valuable institution of information transmission, but there is not as much known about that as one might like.

Silicon Valley, California, illustrates high employee mobility and long term technological and economic growth, and it also illustrates that this way of working and this way of transmitting information and this way of growing an economy is in direct contradiction with a number of legal doctrines. I will limit myself today to trade secrets although the same issues arise with loyalty and non-compete agreements.

Much of the valuable information transmitted by mobile employees fits the legal definition of trade secret, a definition which is very, very broad.[6] It is in fact not possible to form a start-up in most of technology unless you hire people who have been working in that industry and know how things are done based on their experiences. You can't start up with people who are just out of school, and if you are hiring experienced employees, you are acquiring trade secrets.

For litigation purposes, there is a strong interest in denying this. I used to get called and asked if I would be an expert witness and say that something is not a trade secret or that the employee could keep it a secret, and I would say that I don't believe any of those things. I think employees must trade on what they have learned on the last job. Lawyers lost interest

5. *E.g.* PepsiCo, Inc. v. Redmond, 54 F.3d 1262 (7th Cir. 1995) (affirming grant of preliminary injunction to keep former employee from working for a competitor where employer established that the employee would inevitably disclose pricing structure and marketing strategy of employer in the course of his duties related to those at competitor); Durham v. Stand-By Labor of Ga., Inc., 198 S.E.2d 145, 149-50 (Ga. 1973) (grounding the need to uphold nondisclosure portion of restrictive covenant that was otherwise void in theory that certain information has value only so long as a company can exclude others from it); Sun Dial Corp. v. Rideout, 108 A.2d 442, 445-46 (N.J. 1954) (recognizing value in trade secret coming from the ability to exclude others from access to information).

6. "A Trade Secret is any information that can be used in the operation of a business or other enterprise and that is sufficiently valuable and secret to afford an actual or potential economic advantage over others." RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 39 (2008).

in using me as an expert.

So, given the legal framework, how does the transmission of information that would qualify as a trade secret happen? It happens because employers in Silicon Valley, California, do not enforce their rights under trade secret law. This is what was interesting to me. As others have noted, California does not enforce non-compete agreements.[7] So, that is not part of the picture in Silicon Valley. But the California law of trade secrets on the books is very similar to other jurisdictions.[8] So, employers in the valley can, in theory, and sometimes do, sue to prevent employees from departing with trade secrets, but they rarely do so. It is their refusal to enforce their rights under California law that has created Silicon Valley.

Why don't employers assert their rights? There are many different factors, and at this stage of our knowledge, neither I nor anyone else can rank these or sort out their relative contribution to the problem. But what I learned in my interviews was that if you get a reputation for suing departing employees, you will have a hard time recruiting.[9] It will affect your stock price, and it will affect your reputation among your peers.[10] No one wants a reputation in the tech community for suing departing employees. Trade secret suits are hard to win even though California's law on the books is not that different from anybody else's. Judges in California don't like them, and juries particularly don't like them. Those suits don't accomplish much. Sometimes the firm's best investment is in employee information even though the firm can't retain it. Firms, after all, hire as well as lose employees, so they don't want to destroy the system. Interestingly, the employers' implicit promise not to interfere with future employment is the price of the employees' willingness to accept precarious employment. This became very clear when I interviewed employees.[11]

Changing jobs every eighteen months or so is not for everybody. It's

7. CAL. BUS. & PROF. CODE § 16600 (West 2008) ("Except as provided in this chapter, every contract by which anyone is restrained from engaging in a lawful profession, trade, or business of any kind is to that extent void."); Edwards v. Arthur Andersen LLP, 189 P.3d 285 (Cal. 2008) (there is no "'narrow restraint" exception to § 16600).

8. For California's Uniform Trade Secrets Act see CAL. CIV. CODE § 3426 (West 2008); *see* Computer Econ. Group, Inc. v. Gartner Group Inc., 50 F. Supp. 2d 980 (S.D. Cal. 1999) (noting that California became one of more than forty-two states in 1984 to adopt some variant of the Uniform Trade Secrets Act); Surgidev Corp. v. Eye Technology, Inc., 648 F. Supp. 661 (D. Minn. 1986) (analyzing the plaintiff's trade secret counts under both California and Minnesota law because both states' trade secrets laws are substantially similar as both have adopted the Uniform Trade Secrets Act).

9. HYDE, *supra* note 1, at 40.

10. Loss of reputation is documented in my interviews in *id.* Loss of stock value for firms reporting theft of trade secrets is documented in Chris A. Carr & Larry Gorman, *The Revictimization of Companies by the Stock Market Who Report Trade Secret Theft under the Economic Espionage* Act, 57 BUS. LAW. 25 (2001).

11. *Id.* at 67-68.

not the only way to organize an economy. So what makes employees do it? Why would anyone accept a job like that? It takes a certain kind of person. The price of accepting a job like that is that you have to be confident that the employer is not going to interfere with your next opportunities. In the kind of economy I am describing, termination is not that big a deal.

This research was intended as a challenge to the dominant law school discourse of the early 1990s in which we were all hung up on the issue of wrongful termination or unjust discharge. That seemed to be the biggest problem in the American economy. Well, for some people it is. I don't mean to denigrate that. But this research demonstrates that there are people for whom termination itself is not that big a deal, but what could happen post-termination is a very, very big deal.

Finally, hypothetically, you could model the public policy question of employees' ability to take information with them as a question of incentive. If employees have more incentives to be more creative, they can trade on their own ideas and inventions rather than be stuck in firms.[12]

The legal conclusions of the book were appropriately modest since I couldn't untangle all the rest of that stuff. I certainly wasn't calling for the abolition of trade secret law. Instead, I argued that the employer's rights under the employment contract, particularly the employer's ability to insist on loyalty from the employee, should reflect the underlying employment contract. If the employer has shown some loyalty to the employee and implicitly promised a career, it seems to me that employer ought to be able to enforce its rights to loyalty or secrets. If the employer has, by contrast, made it clear from the beginning that the employee is hired for a project and will be out of a job in eighteen months, that should influence the employer's ability to claim loyalty from the employee. This seems self-evident to me and to most of my students, but I still don't know of any cases that adopt that view expressly. And then the more radical proposal I suppose, the more challenging proposal, is that if you take all of this seriously, you might want to think about reducing the scope of trade secret protection.

When I put all this together, the evidence that allowing this information dissemination was good public policy was very slight, and a lot of the facts that I assumed were stylized facts assumed by people who had worked in the Valley. The idea that there was growth through sharing information was mostly based on Saxenian's very stylized comparison of Silicon Valley with the Boston area, and that, of course, was not her most

12. Gillian Lester & Eric L. Talley, Trade Secrets and Mutual Investments, (USC 00-15 2000).

telling contrast, because there is a lot of job mobility in Boston and a lot of growth too – just not quite as much as in Silicon Valley during the years of her study. She did not look at places like Germany or New Jersey that have a lot of tech workers, but where nobody changes jobs, and you don't have anywhere near the growth in California. In addition to Saxenian's comparison, there also an important Federal Reserve Bank of Minneapolis study from 2000[13] that showed the important role of employee mobility in the hard disc drive industry. Where the public interest lies is a normative issue and not a question of evidence, but without evidence, the normative judgment cannot be fully informed. And without these studies, it was not possible to determine exactly how long people stayed on jobs.

Obviously, people move around, and this movement is going to be positive for information diffusion. This is an important consideration. There is an asymmetry of interest in disclosure of information here. The wrong way to think about this, it seems to me, is to talk about information as a property right and to ask whether the employer has a property right in trade secrets or information. Maybe it is a property right, but it is a funny kind of property right because the employee has to disclose that information if the employee wants to work in the industry again or start up his or her own firm. So, the employee's right is not what we usually think of as a property right – which includes the right to exclude others from information – because the employee's interests are all in disclosing that information as soon as possible.

Despite Saxenian's work and the Federal Reserve Bank of Minneapolis study, there were not then and there are not now any rigorous comparisons between knowledge transmission by mobile employees and knowledge transmission by other modes. There are lots of other ways that people find out about things. Saxenian's book says practically nothing about employee mobility. Her book is much more about informal social ties, people drinking together, people knowing each other socially in Silicon Valley, and she describes the Silicon Valley which, as most people say, had passed from the scene by the time the book appeared. Yes, Silicon Valley grows well, but of course it is very hard to untangle the relative contributions of human resources practice, venture capital, Stanford University, sunshine, and California. And on the extent of knowledge transmission itself, will employees take trade secrets? Yes; there are many anecdotes of employees taking trade secrets, but again it is hard to get a

13. APRIL MITCHELL FRANCO & DARREN FILSON, FED. RES. BANK OF MINNEAPOLIS, RES. DEP'T STAFF REPORT NO. 272, KNOWLEDGE DIFFUSION THROUGH EMPLOYEE MOBILITY (2000).

comprehensive picture.[14] Employers don't enforce rights. I conducted a lot of interviews and found they don't enforce their rights. And this refusal is rational, as I explained. I had some interviews on that, and my suggestions are very cautious.

So, what have we learned in the last five years? Quite a lot. We now have much better data than I had when I wrote the book. High turnover of employees is indeed positive for productivity in high tech computer firms. We know more about how employees transmit information. We know that Silicon Valley really does have more job hopping than do other areas of the economy.[15] We also have one of these experiments that life throws our way. Germany attempted to create its own high tech sector by encouraging venture capital, setting up a somewhat unregulated venture capital market outside the regular stock market.[16] The country didn't change anything about its employment practices, though, and the effort was a dud.[17] Based on Germany's experience, it appears very strongly that if you want this kind of tech sector, you have to do something about employees changing jobs. Finally, we know more about employee incentives than we used to. We have some very clever studies to proving that high mobility is positive for productivity. They get into census data and are able to match firms and their employees looking at employee mobility by following employees in the census and looking at the firms they work for. The study I particularly like is the Andersson study that was restricted to computer firms.[18] They examined employee earnings, employment data from state unemployment insurance records, census records, and records on human resources practices in the company and on research and development. It turns out, just as many people had told me for years, that it is different for different firms, and the big break is whether the firm spends a lot on research and development. If a firm is not spending a lot of money on research and, development, it is not going to get a lot of productivity from employees

14. *See* Yuval Feldman, *Experimental Approach to the Study of Normative Failures: Divulging of Trade Secrets by Silicon Valley Employees*, 2003 U. ILL. J.L. TECH & POL'Y 105.

15. Bruce Fallick et al., *Job Hopping in Silicon Valley: Some Evidence Concerning the Micro-Foundations of a High Technology Cluster*, 88 REV. ECON. & STAT. 472 (2006).

16. *See generally* FED. MINISTRY OF EDUC. AND RES., IGNITING IDEAS! THE HIGH-TECH STRATEGY FOR GERMANY (2006), *available at* <http://www.research-in-germany.de/coremedia/generator/dachportal/en/09__Downloads/Download_20Files/High-Tech_20Strategy_20_282006_2C_20112_20pages_29.pdf>.

17. Sigurt Vitols & Lutz Engelhardt, National Institutions and High Tech Industries: A Varieties of Capitalism Perspective on the Failure of Germany's "Neuer Markt." (Discussion Paper SP 11 2005-03, Wissenschaftszentrum Berlin für Sozialforschung)..

18. Fredrik Andersson et al., *The Effect of HRM Practices and R&D Investment on Worker Productivity, in* THE ANALYSIS OF FIRMS AND EMPLOYEES: QUANTITATIVE AND QUALITATIVE APPROACHES 19-43 (Stefon Bender et al., eds. 2008).

changing jobs all the time. Those are more the firms that we used to be concerned with in the 1990s. Firms that don't spend a lot on research and development will get more productivity if they set up our old friends, the internal job ladders, the internal labor markets that we all know and love so well. But if a firm is spending a lot on research and development, as revealed from BLS data, then a high hiring rate is positive for productivity. So are multiple ports of entry into the firm and so are payments by incentives.[19]

A similar study also links census data and data on human capital.[20] If the firm is using advanced technology, there are workers that have returns to ability but will not have returns to experience, which is exactly the point I was making. Again, that is very unusual in human resources practices. Normally you look at a firm and you expect that people will have returns to experience. But it is simply not true in certain sectors of high tech.

So, we know that it really is true that certain firms can get more productivity if the employees move around. We also know more about how employees transmit information. This was something of a black box. The literature on patent citations was just beginning to come out when I was starting. A book by Jaffe & Trajtenberg from MIT Press which comes with a CD rom that shows all the patent citations[21] has become a very handy and cheap way of investigating transmission of ideas. They looked at patent citations, but they weren't interested in labor markets. They make one reference in that book to the labor market and they refer to it as a nuisance parameter.[22] Some other researchers have followed along the Almeida study[23] that existed when I wrote my book and was cited in it. New studies have used patent citation literature to look much more closely at the distinct role of employee mobility and it turns out, unsurprisingly, that employee mobility is really crucial in the firm's ability to make use of other firms' patents.[24] There is only so much you can learn by reading a patent. There

19. *See id.*

20. John M. Abowd, et al., Technology and the Demand for Skill: An Analysis of Within and Between Firm Differences. (NBER Working Paper 13043, 2007).

21. PATENTS, CITATIONS AND INNOVATIONS (Adam B. Jaffe & Manuel Trajtenberg eds. 2005).

22. Ricardo J. Caballero & Adam B. Jaffe, *How High Are the Giants' Shoulders: An Empirical Assessment of Knowledge Spillovers and Creative Destruction in a Model of Economic Growth*, *in* PATENTS, CITATIONS AND INNOVATIONS, *supra* note 21, at 89, 138 n.59.

23. Paul Almeida & Bruce Kogut, *Localization of Knowledge and the Mobility of Engineers in Regional Networks*, 45 MGMT. SCI. 905 (1999).

24. Juan Alcácer & Michelle Gittleman, *Patent Citations as a Measure of Knowledge Flows: The Influence of Examiner Citations*, 88 REV. ECON. & STATISTICS 774 (2006); Rafael A. Corredoira & Lori Rosenkopf, Should Auld Acquaintance Be Forgot: The Reverse Transfer of Knowledge through Mobility Ties (unpublished manuscript 2006), *available at* <http://knowledge.wharton.upenn.edu/papers/1325.pdf>.

are a lot of tech things in the world that you can only make if you hire somebody who has seen it done before – who has done it before.

Lee Fleming's work at Harvard Business School has absolutely gorgeous maps showing spreading patent citations, and he can show these maps of collaborations in industry and patent citations.[25] People tend to cite patents from the regions where the inventor was formerly employed.[26] In other words, location matters in your ability to learn about things, absorb information. Again, this may seem obvious but it is not the way everybody thought about it. We all remember the predictions that in the future location wouldn't matter. You would be sitting in front of your computer, and it wouldn't matter where you were in the world. You'd have access to all the knowledge in the world. People still say things like this. Well, it's just not true, or at least not totally true. Your ability to learn about things and make use of information depends a lot on location, including the locations where you used to live.

The newer data on Silicon Valley job hopping show that college educated men in the computer industry in Silicon Valley do change jobs very rapidly. Other California computer clusters are similar to the valley. To my surprise, there is no general tendency among Californians to change jobs frequently, so it really is a phenomenon particularly in the computer industry.[27]

The German study I mentioned is extremely interesting.[28] This was a natural experiment to create a tech sector by focusing on venture capital, freeing up venture capital, equity and high tech start-ups. The Germans thought their problem was their excessively rigid securities market. That may indeed have been part of their problem, but it wasn't all of the problem. Their excessively rigid labor market was just as important. What happened? Well, it turns out that labor market could be the key here. Germans don't change jobs. There really isn't a market for mid-career scientists in Germany. Only Italy, among all the European countries, has a lower rate of mobility of scientific and technological personnel.

A useful study would repeat the Germany study by looking at New Jersey. New Jersey is sort of the Germany of North America in this respect. The per capita income is one of the highest of any state in the union.[29] It

25. Lee Fleming et al., *Small Worlds and Regional Innovation*. 18 ORG. SCI. 938 (2007).

26. Ajay Agrawal et al., Gone But Not Forgotten: Labor Flows, Knowledge Spillovers, and Enduring Social Capital. (NBER Working Paper 9950, 2003).

27. Fallick et al. *supra* note 15.

28. Vitols & Engelhardt, *supra* note 17.

29. 2007 income rankings for New Jersey, in comparison to the other forty-nine states and the District of Columbia: second for median household income ($67,035); third for median earnings for

has a very educated work force.[30] It has a lot of people working in tech, if by tech you mean chemical companies and drug companies. It has a lot scientists and engineers working for large companies like the former AT&T, Lucent, and drug companies. It has no start-up scene, and it ranks very low among states in venture capital.[31] It has no law firms that specialize in start-ups. You can make a career like that in California and Boston. You can't in New Jersey. Not coincidentally, it is one of a minority of states where an appellate court has adopted the doctrine of inevitable disclosure of trade secrets,[32] and New Jersey vigorously enforces covenants not to compete.[33]

We know from studies of open source software how incentives work for employees to create things even when they are not working for a big company, even if they are not rewarded right away. Depending on the kind of community, it can be very rational for the employees to create things particularly if those employees are going to change jobs. Creating something could be a job advantage in the recruitment process even if you don't have any property to that information.[34]

So, what all this does to me is reinforce the cautious legal conclusions from my book. The data is better than I had at the time of the book. At the very least, any suit against a departing employee should be evaluated against what the employer promised. If the employer promised a lifetime job, then the employer has a right to demand more loyalty than the

female full-time, year-round workers ($42,221) and second for median earnings for male full-time, year-round workers ($54,846). U.S. CENSUS BUREAU, AMERICAN FACTFINDER RANKING TABLES, <http://factfinder.census.gov/servlet/GRTSelectServlet?ds_name=ACS_2007_1YR_G00_> (last visited Oct. 15, 2008).

30. 2007 educational attainment rankings for New Jersey, in comparison to the other forty-nine states and the District of Columbia: sixth for persons twenty-five years and over who completed a bachelors degree (33.9 percent) and eighth for persons twenty-five years and over who completed an advanced degree (12.7 percent), U.S. CENSUS BUREAU, AMERICAN FACTFINDER RANKING TABLES, <http://factfinder.census.gov/servlet/GRTSelectServlet?ds_name=ACS_2007_1YR_G00_> (last visited Oct. 15, 2008).

31. Although it ranked in the first quartile of states for the amount of venture capital disbursed per $1000 of Gross Domestic Product in 2006, the actual amount of venture capital was only $1.72 per $1,000. In 2006, New Jersey tied for seventh place (with Utah) in the amount of Venture Capital funding. The U.S. average was $1.98. The states with the highest levels of funding were Massachusetts ($8.51), California ($7.28), and Washington ($3.51). NATIONAL SCIENCE FOUNDATION, SCIENCE & ENGINEERING INDICATORS (2008), *available at* <http://www.nsf.gov/statistics/seind08/c8/c8.cfm?opt=6&selected=yes&action=map&colname=845> (last visited Oct. 15, 2008).

32. Nat'l Starch & Chem. Corp. v. Parker Chem. Corp., 530 A.2d 31 (N.J. App. Div. 1987); *see also* Tracy Bateman Farrell, *Applicability of Inevitable Disclosure Doctrine Barring Employment of Competitor's Former Employee*, 36 A.L.R.6th 537 (2008).

33. *E.g.* Whitmyer Bros., Inc. v. Doyle, 274 A.2d 577 (N.J. 1971); Solari Industries, Inc. v. Malady, 264 A.2d 53 (N.J. 1970).

34. *E.g.* STEVE WEBER, THE SUCCESS OF OPEN SOURCE (2004); Il-Horn Hann et al., *Understanding the Motivations, Participation, and Performance of Open Source Software Developers: A Longitudinal Study of the Apache Projects*, 52 MGT. SCI. 984 (2006).

employer who didn't promise anything, and I feel even more strongly now that there is a public interest in encouraging mobility of tech workers and not letting employers impede it with excessively broad definitions of trade secrets or non-compete law.

The court agree. Although the California courts have not recognized any limitations on their statutory ban on non-compete contracts, some federal courts assertively applying *Erie* predicted that the California courts would limit this doctrine against all odds.[35] The California Supreme Court just rejected that interpretation of California law and reinforced a broad reading of the statutory ban.[36]

But while we have much better data on high-velocity labor markets than five years ago, there has been no corresponding progress in economic theory. I would just present this as a series of challenges to this group. How can we explain what is going on? The positive view of employee mobility is definitely a challenge to the implicit-contract-right view of employment. The practice suggests that structuring employment as contract rights is not the only way to organize a job market. This job market is also not, however, a neoclassical market. No professional labor economist believes it is. It doesn't make any sense to model this economy as a kind of "shape up" where everybody shapes up for every job every morning, and everybody is hiring all the time. These are career paths, these are incentives, these are our careers. We don't have to throw everything we have learned about careers out the window, but we do need some different theories about different kinds of employment contracts, and this is the moment where employment law and employment economics come into close contact with a number of other economic concepts that have not really been applied in the employment world. This convergence has much more to do with things our corporate law colleagues have been talking about the last few years. It has to do with the theory of the firm: what the firm makes and what the firm buys.

To my mind, the main research agenda going forward has to do with the informational aspects of employment, the way in which employers are frequently hiring for information, and it must include a much better understanding of physical location. If you review the economics journals and you ask about the economic theory of the multi-national firm, or you ask an economist, you will be told we don't really have a theory of the

35. Int'l Bus. Mach. Corp. v. Bajorek, 191 F.3d 1033, 1041 (9th Cir. 1998) (recognizing a narrow restraint exception to California's prohibition on restraints of trade); Gen. Commercial Packaging, Inc. v. TPS Package Eng'g, Inc., 126 F.3d 1131, 1133 (9th Cir. 1997); Campbell v. Trs. of Leland Stanford Jr. Univ., 817 F.2d 499 (9th Cir.1987).

36. Edwards v. Arthur Andersen LLP, 189 P.3d 285, 293-94 (Cal. 2008).

multi-national firm, or rather we divide that into two questions. One question is called "economics of the firm" and the other question is called "economics of location." There is a big economics literature on the economics of the firm, what to make or buy and what to do in-house. In other words, the theory of the firm multi-national divides on why the auto parts are made by an independent firm, from why they are made in Mexico.

Our current way of looking at employment is kind of an artificial way of dividing things up. For example, this division doesn't really tell us much about some really important things that we would like to know for policy purposes in understanding the relative roles of outsourcing, globalization, and immigration. It seems to me that the economics of information does, and the economics of location does. Human capital does not. For example, one policy question is that every year the tech firms go to Congress and they say we need 195,000 H1B visas because of the shortages of programmers. And people say, what shortage of programmers? You can't show us there is a shortage of programmers. The modal holder in the H1B visas is a programmer from India who makes about $50,000 a year, which is not a lot for a programmer in California. So employers say, if you don't give us those visas, then we will send that work overseas. That's not an empty threat. They do send a lot of programming work overseas. But a lot of it has to be done in California. Why is that?

We are not going to know that from the economics of implicit employment contracts, lifetime employment contracts full of promises, because that is not how they are hiring programmers. We are not going to know that by assuming a global shape-up, and we are also not going to know that from human capital. Human capital just dies in the water here. A typical programmer on an HIB visa has the same human capital in his head whether he is in Bangalore or whether he is in Cupertino, but there is something about the reason that the firm wants to bring him to Cupertino, instead of outsourcing this programming job to Bangalore where excellent programming is done.

Thus, there is something about location, networks, and the transmission of information that makes the individual a more productive programmer in Cupertino than he would be in Bangalore. So the more we understand this aspect of the economics of short term employment contracts the more we will have a real alternative to the human capital school which I for one would be happy to do without.

Professor Michael V. Risch*: Good Afternoon. I am thrilled to be here talking about what I think is a critically important but under-studied topic: information transfer in the labor market, which I view to be mainly a trade secret issue. I think that Law and Economics provides a really good intersection for labor and intellectual property policy. What you heard just now is mostly on the labor side. I am going to focus more on the intellectual property side, primarily because that's the angle I'm coming at it from, but also because I think the analysis comes together very nicely.

I. POINTS OF AGREEMENT

I generally agree with both the analysis and conclusions from Professor Hyde's book[37] and what he presented here as well. The two things I really liked in the book were, first, the accurate portrayal of Silicon Valley, which was admittedly stylized in the book. I've spent a lot of time in Silicon Valley and I thought the depiction was pretty accurate. It was nice to see that later studies confirmed the reality I saw; that's always a good thing.

Second, the point that was emphasized in the book, and that was made here as well, is the notion that trade secret law is not critical to innovation and productivity. I give a slightly different reason why this is true, but it is nice to see support for that position both in theory and in the data we have seen, and I think that that is very helpful for the study of trade secrets.

Given these points of agreement, what I want to focus on are three areas of comment for extension and further study based on Professor Hyde's research. The first is trade secret law in California as discussed in the book. There wasn't much discussion of the law today, and California's trade secret law was assumed to be very weak, even though that law is the same on the books as in every other state. Professor Hyde posits that the reason for weak law is to enhance productivity – I want to talk about that a little bit. Second, I want to talk about what we should do about trade secrets. I want to talk about some policy and areas for research. Third, I want to talk about how some of the arguments and data we have just seen fit into what I think is a broader economic framework of how we look at protection of information, and I am not sure it necessarily relates to just high velocity markets.

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37. HYDE, *supra* note 1.

II. THE VITALITY OF TRADE SECRET LAW IN CALIFORNIA

I think the rumors of trade secret law's demise in California are a bit exaggerated. A current update on the law there, however, is that trade secrets are under attack. California, just recently, came out with new trade secret jury instructions – so this will be the law of the "state land" – where the definition of trade secrets told to juries is significantly stricter than the definition of trade secrets on the books.[38]

I know this, unfortunately, from experience. I just lost an appeal in the summer of 2007[39] on the definition of trade secrets where basically the Court of Appeal in Santa Clara County said, we know the statute says "economic value" but what you really must have is sufficient value over your competitors.[40] This requirement is not in the statute, but it is now going to be in the jury instruction in the concept of "business advantage,"[41] so I think to some extent we are seeing a weakening of protection.

Second, covenants not to compete are illegal *per se* in California, as the California Supreme Court affirmed when it recently rejected the rule of reason.[42] The inability to enforce non-competes, however, makes it harder protect trade secrets.[43]

That said, I am not sure that trade secret law is weak when it really matters. I have five quasi-empirical points from my fifteen years of experience with trade secrets and information management in California.[44]

38. CAL. CIV. JURY INSTRUCTIONS § 4402 (2008) provides that to prove the existence of a trade secret, a plaintiff must prove "1. That the [e.g., information] [was/were] secret; 2. That the [e.g., information] had actual or potential independent economic value because [it was/they were] secret; and 3. That [name of plaintiff] made reasonable efforts to keep the [e.g., information] secret." Section 4412 further provides that the information will have independent economic value only when "it gives the owner an actual or potential business advantage over others who do not know the [e.g., information] and who could obtain economic value from its disclosure or use." Trade secrets are defined by CAL. CIV. CODE § 3426.1(d)(1)-(2) (West 2008) a bit more broadly in terms of secrecy and value as "information . that: (1) Derives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and (2) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy."

39. Yield Dynamics, Inc. v. Tea Sys. Corp., 66 Cal Rptr. 3d 1 (Cal. App. 2007).

40. *Id.* at 17-18.

41. CAL. CIV. JURY INSTRUCTIONS § 4412 (2008).

42. Edwards v. Arthur Andersen LLP, 44 Cal. 4th 937 (2008).

43. Employers must prove that ex-employees misappropriated information, CAL. CIV. CODE §§ 3426.1(b), 3426.2, 3426.3 (West 2008), which is more difficult than simply proving that they are competing.

44. In the fifteen years I spent working at a Silicon Valley IP law firm before, during, and after law school, I had the opportunity to participate in countless trade secrets matters, including litigation, threatened litigation, start-ups, IP audits, company policy drafting, and employee entrances and exits. In doing so, I have elicited or read thousands of witness statements gathered by interview, deposition, and trial. I have reviewed hundreds of thousands of pages of documents and source code. Finally, I have prosecuted or defended many trade secret claims from temporary restraining orders to summary judgment and through trial. The empirical basis for this information is decidedly unscientific, but I

I haven't done an empirical study, but having conducted a lot of discovery in litigation and interviews, etc., I have seen what trade secrets are actually taken by ex-employees, both when there is a lawsuit and when there is not.

Here are the five points. Number one, departing employees rarely directly compete when they create a start-up company. Usually they are developing some offshoot idea, and they are exploiting something that is more akin to a corporate opportunity. It's something the old employer doesn't want to do, and therefore, the employee wants to spin-off. It is that point where you would expect to see high productivity from networked information because you are really creating add-ons. Such companies are developing complementary components rather than directly competing.

Second, and I think this is a critical point for the broader framework I will get to later, the information that is usually taken once you get down to the actual detailed facts is almost never as important and valuable as the employer fears it might be.[45] Now, of course, what's in the head you don't know – but if you look at what's actually transmitted on paper and discussed in e-mails, etc., rarely do you see the "crown jewels" misappropriated.[46] This is a neutral observation; I've seen it on the employer side as the plaintiff, and I've seen it on the employee side as the defendant. I remember receiving extensive discovery in many cases where we had planned to find out just how much information the defendants took, only to look at the paper trail and say, "There is nothing here!" Of course, when you represent the employee, you say that nothing was taken from the beginning as a matter of course; when you actually receive your client's discovery and find out that the denials are true, it is quite helpful.

Third, for the above two reasons, and as Professor Hyde points out, it is extremely difficult for a plaintiff to win a trade secret case at trial and through appeal. That leads to point number four, which is that most trade secret cases are punitive in nature.[47]

This leads to point five: Does trade secret law still exist in California? The answer is "yes": if there really is valuable, directly-competitive

nonetheless draw the conclusions discussed from my experience.

45. I suspect that when employers report in Professor Hyde's book that they routinely receive and use information that ex-employees bring from another company, such information is almost never core technology and instead is "soft" information about direction, marketing, experience, and failures.

46. To be sure, there are exceptions. The *Cadence v. Avant!* case is a notable exception where there was a large scale misappropriation and a directly competing product. Cadence Design Sys. v. Avant! Corp., 125 F.3d 824 (9th Cir. 1997). Thus, "crown jewel" misappropriation does occur from time to time, including in my own experience. Those, however, are the easy cases.

47. Or perhaps they are strategic – designed to give the old employer time to enter the market now that it sees the opportunity for whatever the ex-employees are working on.

information that's taken, then California provides a very strong remedy.[48] If there is evidence, a plaintiff can certainly get past summary judgment and to a jury, so plaintiffs can get some sort of relief. In other words, if one shares a "real" trade secret improperly, California law provides a penalty.[49]

III. POINTS OF FURTHER STUDY

If it is true that there is widespread sharing in high velocity labor markets even though trade secret remedies are available, one area for further study that I would recommend is to determine what is the type of information that is being shared. The patent citation study[50] discussed by Professor Hyde shows there is some sharing of information. However, patents are public; the inference that is being made here is that there is a bunch of non-public information that gets shared with the patent information and, therefore, because of the regional clumping in patent citations we can assume that there is non-public information sharing that allows competitors to learn about local, secret patenting activity. This is a big assumption, and an unproven one. Instead, I think further study as to the quality, quantity, and type of information that is being transmitted will be very helpful, and I have my own theory that I will get to it in a minute.

Second, something that wasn't discussed much today is that one suggested way to address the high velocity labor market is to let employees own the information and then, after the fact, have employers negotiate to obtain rights to some of that information. The theory is that the implicit high velocity employment contract says that the employee will be gone in eighteen months[51] and, therefore, should be able to take the information with him or her unless the employer negotiates to keep it. I think other areas for further study relate to what markets actually do with information ownership.

I can give four categories. The first group consists of big idea people –

48. For example, while anti-competitive rules like "inevitable disclosure" are not available to plaintiffs, the fact that information is "readily ascertainable" does not negate such information's trade secret status. Instead, a defendant who has misappropriated secret information must show that the information was in fact "readily ascertained" from some other source. Abba Rubber Co. v. Seaquist, 286 Cal. Rptr. 518 (App. 1991).

49. Further, it is difficult to square a model of "lax protection" of information with the growing number of patent infringement lawsuits. Thus, even if the conclusion that trade secret law is alive and well is wrong, it could simply be that weak trade secrets law has been replaced by strong patent law. In other words, failure to protect secret information will not reduce the amount of information produced, just the type.

50. PATENTS, CITATIONS & INNOVATIONS, *supra* note 21.

51. That is, there is no promise of lifetime employment and thus the employment contract is less valuable.

some call them patent trolls. They come up with brilliant (or not so brilliant) inventions, and they may try to commercialize them. More likely, they try to sell them to people. Sometimes they are successful and sometimes they are not, but the idea is that they are doing it on their own dime. Second are founders of companies. These are people who work for very little money (sometimes for free) developing their ideas with the hope that their ideas will be commercialized, be a great product and make them lots of money. Third, we have professors who earn less than their industrial counterparts but typically get to keep 50 percent of the inventions they make without risking their own assets. Fourth, we have employees who typically don't get to keep any of their trade secrets.

I would say that we don't want to mess with these market categories without further study; the idea of saying employees should now have much more ownership of the trade secrets they develop could significantly affect their wages.[52] If employees want to keep information when they leave when that information is important and directly competitive to the employer, then the employer is not going to pay them very much in guaranteed wages.[53] The employer might give them 100 percent stock, and if the idea is successful and exploited by the employer, then great, and if it is not, then all are taking that risk.

One analog I would want to look at is patent ownership. Currently, the default rule is that the employee gets to keep the patent. The employer usually gets a shop right, but employees can quit and keep the patent and do what they want with it.[54] Of course, we all know that no technology employee gets hired unless he or she signs an assignment that says the employer owns all patents. So, if we had a rule that weakened trade secrets and said that employees get to keep the trade secrets, then employers will just ask them to sign an assignment, which they already do anyway for patents.[55] In California, by the way, the statutory rule is that employers

52. The *ex post* proposal is arguably not even necessary. Employees who want to own their ideas can take the risk at their own expense and reap the rewards. If they do not want to take a risk, they can become an employee and let the company take the risk and bear the reward. This ties to an earlier observation; many trade secret cases are really fallout from corporate opportunity issues, where the employee believes that the employer is not running with the idea, and wants to leave to take the risk of developing the idea.

53. Another consideration that needs more development is that the employer does not know which ideas will lead to profits. This is one reason we countenance exclusivity in patents - to induce research in areas that may fail, we must allow above market returns for ideas that succeed. Allowing employees to own everything and then doing an after the fact negotiation of only the valuable ideas would skew expected returns and thus fundamentally change the employment market.

54. Robert P. Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J. LAW & TECH. 1, 7 (1999).

55. With patents, default is *not* that the employer owns the invention, yet we see employers hiring only on assignment. Thus, if trade secrets were owned by the employee, there is no reason to expect

own all the information that is generated by employees;[56] I believe the transaction cost of doing it the other way around would be prohibitive.[57] So, my second point essentially is we have to do a lot more study about what would happen in the market if we changed the rules about who owns information.

IV. BROADER FRAMEWORK

This leads to my last point, which is, how can we fit the arguments that we have seen here into a broader economic framework? The framework I am going to discuss was first developed by Friedman, Landes, and Posner.[58] I extended it in a recent article.[59] In that article, I looked at remedies and attorney's fees because those are very important to the efficient operation of trade secret laws. The basic gist of the argument is to look at the cost of protection and the cost of attempts to discover information rather than at the incentive to create information.

Under a cost minimization theory, we should protect more then just the information that would not have been created otherwise, which is a primary policy suggested by Professor Hyde. Professor Hyde's proposal is that if trade secrets are not necessary for innovation,[60] then we should only protect that information which would never have been created without trade secret law.

The problem with this theory is that companies are going to continue to create as much information as they find profitable, and the only real question is what they will do to protect that information. In trade secret law, providing a remedy causes companies to spend less money protecting information. Sometimes that means secret information is improperly

anything different – signing of an assignment as a condition of employment. Even if there were no assignment, we must look at *ex ante* pricing of employment – employees would now be given a choice: current wages with the assignment, or small wages with bonus without the assignment, where the bonus is paid for actual production and assignment of information. This outcome could be even worse for the employee, as employees who fail to perform might get paid nothing.

56. CAL. CIV. CODE § 980 (West 2008). Professor Hyde and I diverge on this. Hyde says it is "barbaric" for an employee to be forced to disclose what is in his or her head, while I say that such information is what the employee was paid for.

57. As a practical matter, exit interviews are not a negotiation. Additionally, the more valuable the information is to the employer, the more likely there will be an inefficient "hold-up." Merges, *supra* note 54, at 12-16.

58. David D. Friedman et al., *Some Economics of Trade Secret Law*, 5 J. ECON. PERSP. 61, 62 (1991), *reprinted and expanded in,* WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 354 (2003).

59. Michael Risch, *Why Do We Have Trade Secrets?*, 11 MARQUETTE INT. PROP. L. REV. 1 (2007).

60. This is a point on which Professor Hyde and I agree, though we disagree on the implications.

shared. That's okay, because what trade secret law does is create a full internalization so that the amount of value to each of the parties will efficiently guide what happens.

So, for example, if the value of the information is low, we are not likely to see companies enforce their trade secret rights. That, I believe, is what is happening in the story that Professor Hyde tells about information sharing in high velocity labor markets. It is true that many companies don't enforce their trade secret rights and it is true that employees leave with trade secrets. I believe, however, if we actually looked at the type of information being shared, it is not high value information like source code. Instead, I think we would find that it is general "experience-plus." And that "plus" is not valuable enough to warrant the filing of a trade secret case. But it really doesn't matter how much the value is; under full internalization, if the user of the information, the alleged misappropriator, believes that there is a high value then he or she will have to return some of that value back to the company that originated the information in the form of damages. And, if the value is high enough, the risk of trade secret damages is worth it to the employee, and we will then have to consider more complex questions of enforcement, attorney's fees, etc.

Professor Hyde refers to some of this in his book. He points out that employers will choose not to sue; the question is whether that is an efficient protection of information, and it probably is.

However, Professor Hyde dismisses the "reduced protection expenditures" theory in his book because there is not a lot of evidence to support it. However, I look at the lack of evidence like the train paradox. We know there is nobody standing on the platform at noon; therefore, we do not need a new noon train. Of course, there is no train scheduled at noon so obviously there is nobody standing on the platform. Thus, I think the area of further study here is to look comparatively at what happens when we have no trade secret protection versus trade secret protection most likely in international contexts. Similarly the problem we have in the U.S. is that the default rule is trade secret protection. So, comparing behavior with low protection versus high protection is tough when there is no alternative regime.

I have a data point of one on this issue. I had an old client who was bragging to me about his company's new facility in China and how they had retinal scanners, how they have a setup like casinos with a catwalk and people looking down, how they have no USB ports on computers, locks on the CD ROMs, and very limited Internet access. I was thinking to myself, "Boy, is that expensive!" The company does not have any of those

precautions here in the U.S. I think the only thing that justifies the higher level of protection is that in China, the client did not believe the company had a remedy for misappropriation. So the company spent much more on protection.[61] I think looking comparatively at behavior in countries with high protection versus behavior in countries with low protection will flush out just how much of the story has to do with protection of information versus some other story.

Finally, with respect to covenants not to compete, one theory that Professor Gilson had many years ago is that companies would be more aggressive with trade secret litigation where covenants not to compete are disfavored.[62] I don't think we have good data on that, but I think it is something we want to study. I think that if the California Supreme Court scales back covenant not to compete bars, which I think is unlikely, given its recent reinforcement of the bar, we would actually have some comparison of the amount of trade secret enforcement actions before and after that turning point.[63] Thank you again for the opportunity to comment.

Professor Jagdeep S. Bhandari[*]**:** The following is the paper of Professor Bhandari, entitled *Migration to Developed Countries and Labor Markets*.

I. INTRODUCTION

Large scale international migration, whether temporary or permanent is not a new phenomenon.[64] In the United States, the *belle époque* of immigration is generally agreed to be the period ending with the commencement of hostilities of World War I in 1914.[65] As noted by

61. Also, Robert Sherwood describes the costly efforts that businesses in Brazil and Mexico exert in an attempt to keep information secret in the absence of meaningful trade secret protection. ROBERT M. SHERWOOD, INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, 117-22 (1990).

62. Ronald J. Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants not to Compete*. 74 N.Y.U. L. REV, 575 (1999). The point is that lack of enforceable non-compete agreements does not mean that trade secret protection is weak; instead, it means that companies are more likely to enforce trade secret rights.

63. This would also bear on another point Professor Hyde makes. Non-compete agreements should be disfavored *not* because they stop the sharing of trade secret information, but because the hinder start-up companies from exploiting tangentially competitive ideas that their former employers were unable or unwilling to pursue. Such a race to innovate is not possible with a non-competition agreement hanging over an ex-employee's head.

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64. Clearly, migration can be regular (legal) or irregular (illegal) or permanent versus temporary. In what follows, unless otherwise indicated to the contrary, references to inbound immigration will include both regular and irregular migration.

65. TIMOTHY HATTON & JEFFREY WILLIAMSON, GLOBAL MIGRATION AND THE WORLD ECONOMY: TWO CENTURIES OF POLICY AND PERFORMANCE 12-14 (2006).

Timothy Hatton and Jeffrey Williamson, not only was the number of immigrants arriving annually in the U.S. probably the largest in the twentieth century, but in relative terms, because of the much lower population in the U.S. than currently, the rate of immigration was at an unsurpassed high.[66] Correlatively, emigration rates from the source countries (mostly the United Kingdom, Germany and to some extent northern Europe) was also commensurately at unprecedented levels.[67] Thereafter, mass migrations – some involuntary – also occurred in the 1930s and 1940s before and during the World War II period.[68]

In more recent times, U.S. immigration levels have risen sharply following some decades of moderate inbound immigration.[69] In turn, the rapid and growing influx of immigrants has sparked a large literature on the labor market impact of immigration for the host country, and to a much smaller extent, the impact of emigration upon the source country.[70] The impact of immigration is by no means limited to its labor market effects or even to general economic effects (such as those on fiscal burdens, inflation, credit markets, or the informal sector or "shadow economy," etc.). A voluminous literature on the effects of immigration on non-economic conditions such as "cultural" assimilation, crime, civic and political participation exists in the areas of sociology and anthropology.[71] Other strands of the literature deal with changes in political structure and the hegemony of the state in an age of transnationalism and transcitizenship to name a few.[72] For present purposes, the objective is limited in scope, and these remarks deal only with the labor market impact of migration, eschewing other possible economic and non-economic effects. It is also to be understood that this contribution is predominantly a concise survey of recent literature and is not intended to present new scholarship except by way of commentary.

66. *Id.* at 15-16.

67. *Id.* at 12-14.

68. TIMOTHY J. HATTON & JEFFREY G. WILLIAMSON, THE AGE OF MASS MIGRATION: CAUSES AND ECONOMIC IMPACT 7-12 (1998).

69. *See* U.S. DEP'T OF HOMELAND SECURITY, 2007 YEARBOOK OF IMMIGRATION STATISTICS.

70. Much of the literature dealing with the effect of emigration upon sending countries has focused on two issues, namely the "brain drain" (referring to the loss of highly skilled labor from source countries) and on positive impact of remittances received from expatriate workers.

71. *See, e.g.*, IMMIGRATION RESEARCH FOR A NEW CENTURY (Nancy Foner et al., eds., 2000); Jagdeep S. Bhandari, *International Migration and Trade: A Multi-Disciplinary Synthesis*, 6 RICH. J. GLOBAL L. & BUS. 113 (2006).

72. Some of these diverse themes are reviewed in Bhandari, *supra* note 71.

II. IMMIGRATION AND THE LABOR MARKET IN THE HOST COUNTRY

In principle, the effects of migration on host (developed) countries can be categorized according to the type of immigrant labor, whether (a) high skilled or (b) low skilled, and by the effects of the migration upon (i) low skilled natives (ii) high skilled natives and (iii) prior immigrants in each skill category. In each category, an increase in available supply of labor due to immigration, would be expected to lead to a decline in real wages for natives. This assumes of course, that markets for labor according to skill types are segmented, that foreign born and native born is substitutable, that there is no accompanying change in complementary factors such as capital, and that labor markets are competitive and well-functioning in all relevant aspects.

Much of the empirical literature in the area falls into two strands: (1) inter-area spatial studies comparing high immigrant density areas with low density areas; and (2) national, aggregate studies. Some studies focus on markets for specific occupations such as computer programmers,[73] or for Ph.D. students in the U.S.[74] and will be briefly reviewed in what follows. In addition, I also discuss briefly related results from other countries such as the United Kingdom and Germany.

III. THE NEOCLASSICAL THEORETICAL MODEL

In the standard neoclassical framework labor demand and labor supply functions are of standard type (downward and upward sloping respectively in real wages).[75] It is standard textbook learning that a positive exogenous shock to labor supply leads to a rightward shift in labor supply and in the immediate short run with all else unchanged, to a decline in post-immigration real wages of native born workers in the sub-market. At the same time, there is a loss of native employment as some native workers opt out of the workplace, a gain in total employment, an increase in total national income, as well as redistribution of income in favor of capital owners. While the effects upon per capita income for all workers (including both labor and capital income) cannot easily be derived in this framework, there is clearly an increase in aggregate national income which is often

73. Madeline Zavodny, *The H-1B Program and its Effects on Information Technology Workers*, ECON. REV., Third Quarter 2003, at 33.

74. George Borjas, *Do Foreign Students Crowd out Native Students from Graduate Programs?*, *in* SCIENCE AND THE UNIVERSITY (Paula E. Stephan & Ronald G. Ehrenberg, eds., 2007).

75. *See, e.g.*, LINDA LEVINE, CONG. RES. SERV., IMMIGRATION: THE EFFECTS ON LOW-SKILLED AND HIGH-SKILLED NATIVE BORN WORKERS 3-4 (2007), *available at* <http://www.ilw.com/immigdaily/news/2007,0430-crs.pdf> (last visited Oct. 15, 2008) [hereinafter *CRS Report*].

referred to as the "immigration surplus."[76] It should be clear however, that native employment and real wages both decline in the short run in this hypothesized world and so does per capita income of native born workers whose source of income is labor income alone. It should be no surprise that native workers in this labor sub-market would be anti-immigration in their views. At the same time, native capital owners and owners of complementary labor skills would find their economic lot improved (with respect to real wages as result of inbound immigration). Pre-tax real wages on income are not the only relevant income criterion and one would also expect that states and population sub-classes with high tax burdens that are utilized to support immigrants would be averse to further immigration. In a recent short monograph, Gordon Hanson details the divisive nature of the immigration debate.[77]

But are this framework and its implications likely to be realistic? In part, this question can be related to the assumptions underlying the neoclassical model, several of which may be questioned and have in fact, been relaxed in subsequent empirical work. First and foremost, labor markets are not generally viewed as being instantaneously flexible – a characteristic for example, of option markets or of stock markets – this is apart from the fact that some wages may be set by long term wage contracts under the aegis of collective bargaining.[78] It may therefore, be unrealistic to expect an immediate downward adjustment in real wages as predicted by the neoclassical framework. Second, a crucial assumption of that framework is that native and foreign born labor is interchangeable (perfectly substitutable) in this specific labor class. As later work has pointed out, this may be untrue even for equivalent education levels (assuming that U.S. and foreign education levels can be equivalently

76. *See, e.g., id.* at 3. For a more detailed analysis, see George J. Borjas, *The Economic Benefits from Immigration*, 9 J. ECON. PERSP. 3, 5 (1995); George J. Borjas, *The Economics of Immigration*, 32 J. ECON. LITERATURE 1667 (1994).

77. GORDON HANSON, WHY DOES IMMIGRATION DIVIDE AMERICA? PUBLIC FINANCE AND POLITICAL OPPOSITION TO OPEN BORDERS (2005). Additional papers along these lines discussing distributional issues and attitudes of categories of individuals toward immigration are Jagdeep S. Bhandari, *Migration and Trade Policies: Symmetry or Paradox?*, 6 J. INT'L BUS. & LAW 17 (2007); Jens Hainmueller & Michael J. Hiscox, *Educated Preferences: Explaining Attitudes Toward Immigration in Europe*, 61 INT'L ORG. 399 (2007); Anna Maria Mayda & Dani Rodrik, *Why Are Some People (and Countries) More Protectionist than Others?*, 49 EUR. ECON. REV. 1393 (2005); Kevin H. O'Rourke & Richard Sinnott, *The Determinants of Individual Attitudes towards Immigration*, 22 EUR. J. POL. ECON. 838 (2006).

78. The percentage of the U.S. labor force that is covered by collective bargaining union contracts has seen its heyday and has exhibited a downward trend. *See* Bureau of Lab. Statistics, U.S. Dep't of Lab., Press Release, Union Members in 2007 (Jan. 25, 2008), <http://www.bls.gov/news.release/pdf/union2.pdf> (putting at 12.7 percent the unionization rate in the U.S., down from over 20 percent in 1983). In Europe on the other hand, collective wage agreements and powerful unions are still prevalent, especially in some industrial sectors of the economy.

measured). Third, over longer periods and particularly in the modern era of "rapid response," one would not expect either capital stock or labor demand to remain unaltered. In particular, complementary factors such as capital or complementary labor might easily adjust in a relatively short period to augment the demand for labor for the precise sub-market under consideration. Were this to be the case, and depending upon the relevant elasticities of substitution, it is entirely possible that no decline in either native employment or post-immigration wages occurs. Some of the recent empirical literature discussed below suggests precisely that these positive effects may occur and may in fact overshadow any negative effects. Fourth, in the intermediate run, the stark results of the native neoclassical framework may be undone by native born workers responding to the influx of immigrants by either reinvesting in education and training, which in turn enhances total factor productivity, or by simply abandoning local markets and relocating ("diffusion effects") which would offset the boost in labor supply and undo the effects noted above.[79] Finally, related to the issues of complementary labor demand, two-way causality between immigration and labor demand and the difficulty of isolating true exogenous shocks to labor supply bedevil empirical work. I turn next to a brief review of the empirical or applied literature for the U.S., particularly in the context of low skilled immigration. Thereafter, I shall briefly discuss the effects of high skilled immigration in the U.S. and then some selected results from other advanced countries such as the United Kingdom and Germany.

IV. EMPIRICAL RESULTS FOR THE U.S.

The neoclassical framework discussed above clearly suggests that native born workers in the affected labor market experience both a decline in per capita income and employment and to this extent, are unambiguously worse off as a result of the immigration influx. At the same time, newly arrived immigrants undoubtedly gain from their sojourn to the U.S., for U.S. wages, even adjusted in terms of purchasing power parity are several times those of source countries. But, what about the average U.S. worker, i.e. including workers across all skill classes? This question can be addressed utilizing data on either local or aggregate levels, while the effects upon particular labor sub-markets for specific occupations is better examined in the context of the immediate local markets, except of course, for highly educated and skilled labor such as Ph.D.s for whom the market is

79. Carmel U. Chiswick, *The Impact of Immigration on the Human Capital of Natives*, 17 J. LAB. ECON. 464, 482 (1989); Michael J. Greenwood & John M. McDowell, *The Factor Market Consequences of U.S. Immigration*, 24 J. ECON. LITERATURE 1738, 1749 (1986).

undoubtedly national or even international. Unsurprisingly, researchers working in this area have arrived at differing conclusions. In part, as mentioned below, the effects of immigration upon internal migration and vice versa remain unresolved to some degree.

As a preliminary matter, recent estimates of the foreign born component of the U.S. labor force are in the neighborhood of 14-15 percent.[80] It is also known that a large majority of immigrants are bimodal in their skill endowments. A large proportion (particularly, those originating in Mexico and some Central American countries) are low skilled,[81] while a small percentage (primarily from South and East Asia) are highly skilled.[82] Only a small percentage of immigrants are in the intermediate skills category, which is by far the largest component of the U.S. labor force.[83] On an *a priori basis*, one would expect an influx of immigrant labor, concentrated at the low and high ends of the skills spectrum to have little adverse impact upon the large intermediate skilled native U.S. labor force.[84] It should also be noted that the modern inflow of immigrants into the U.S. has been a steady phenomenon over a period of decades, accelerating without doubt in the 1990s and beyond.[85] However, it is scarcely the case, except for some local labor insurgence due to the Mariel Boatlift or Hurricane Mitch that aggregate supply in the U.S. has experienced a large and positive shock. If there are negative effects on U.S.-born labor, one would more likely locate them in local markets or perhaps, more transparently in perceived entry barriers in certain occupations.

80. CONGRESSIONAL BUDGET OFFICE, THE ROLE OF IMMIGRANTS IN THE U.S. LABOR MARKET 1 (2005), *available at* <http://www.cbo.gov/ftpdocs/68xx/doc6853/11-10-Immigration.pdf> (last visited Oct. 16, 2008); COUNCIL OF ECON. ADVISORS, EXEC. OFFICE OF THE PRESIDENT, IMMIGRATION'S ECONOMIC IMPACT 1 (2007) [hereinafter CEA], *available at* <http://www.whitehouse.gov/cea/cea_immigration_062007.pdf> (last visited Oct. 16, 2008).

81. *See, e.g.*, George J. Borjas & Lawrence F. Katz, *The Evolution of the Mexican-Born Workforce in the United States, in* MEXICAN IMMIGRATION TO THE UNITED STATES 13, 20-24 (George J. Borjas ed., 2007).

82. *See* George J. Borjas, *The Labor-Market Impact of High-Skill Immigration*, AM. ECON. REV., May 2005, at 56 [hereinafter, Borjas, *Labor-Market Impact*].

83. In part, this is due to the fact that the education and skill levels of U.S. native workers have evolved upward. See, e.g., Borjas & Katz, *supra* note 81, at 21.

84. If anything, one might expect a positive effect of low skilled immigration upon high skilled native born labor due to possible complementarities.

85. Many scholars suggest that the seeds of illegal immigration into the U.S. were sown with the termination of the Bracero Program in 1963. The former Braceros had forged significant social and other networks by the time of the formal cessation of the program. With established networks and lowered migration costs, legal migration once permitted under the Bracero Program was simply replaced by illegal migration. *See* Douglas Massey & Felipe García España, *The Social Process of International Migration*, 237 SCIENCE 733 (1987) (showing that the existence of networks and associated decrease in immigration costs is a significant factor in immigration trends).

A. Spatial Studies

Spatial or local labor market studies compare areas or locales with high immigrant density with those of lower immigrant concentration. For the most part, this literature focuses of the low-skill end of the market as markets for highly skilled labor (for example, those with Ph.D.s) are scarcely expected to be local. While some of the studies and their results are discussed below, in general, such spatial studies do not find that labor markets for low skilled labor have experienced significant or even measurable adverse effects in areas of high immigration density.

In a series of papers and related work, George Borjas[86] has suggested that such spatial studies might seriously underestimate the wage effects of inbound immigration in local markets because of labor mobility or "diffusion." Specifically, native born workers in high immigrant density areas do respond to the tightening labor market, not by accepting cuts in real wages but instead by displacement or moving out of the area into other parts of the country with better opportunities.[87] Some may opt out of the labor market entirely. If true, the statistically measured real wage effects of immigrant inflows in localized low skills markets would be minimal, as might the effects upon total employment in the region, the only effect being substitution of native born workers with foreign born labor.

Some studies have focused specifically on the displacement of native born labor or on the related amount of internal migration of native born workers from certain localized markets. For example, Michael White and Yoshi Imai report a slight decline in native inbound migration (compared with normalized patterns) to areas with high immigrant concentration.[88] Mary Kritz and Douglas Guark on the other hand, report measurable evidence of non-Hispanic white men leaving states with large immigrant inflows in the 1980s.[89] Some other earlier studies reporting a weak link

86. *See* GEORGE J. BORJAS ET AL., BROOKINGS PAPERS ON ECON. ACTIVITY No. 1, HOW MUCH DO IMMIGRATION AND TRADE AFFECT LABOR MARKET OUTCOMES? 3 (1997) [hereinafter BORJAS, BROOKINGS PAPER], *available at* <http://ksghome.harvard.edu/~GBorjas/Papers/Immigration_and_Trade.pdf> (last visited Oct. 17, 2007); George J. Borjas, *The Labor Demand Curve is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market*, 118 Q. J. ECON. 1335, 1338 (2003) [hereinafter Borjas, *Labor Demand Curve*]; George J. Borjas, *Native Internal Migration and the Labor Market Impact of Immigration*, 41 J. HUM. RESOURCES 221, 222 (2006) [hereinafter Borjas, *Native Internal Migration*]; George J. Borjas et. al., *Searching for the Effect of Immigration on the Labor Market*, 86 AM. ECON. REV., May 2006, at 246, 250 (hereinafter Borjas et al., *Searching for the Effect*].

87. *See, e.g.*, BORJAS, BROOKINGS PAPER, *supra* note 86, at 3; Borjas, *Native Internal Migration*, *supra* note 86, at 222.

88. Michael J. White & Yoshie Imai, *The Impact of U.S. Immigration Upon Internal Migration*, 15 POPULATION & ENV'T 189, 202 (1994).

89. Mary M. Kritz & Douglas T. Gurak, *The Impact of Immigration on the Internal Migration of*

between immigration and internal migration are collected in work by George Borjas.[90] In sum, reported studies for the most part do not find significant outmigration of natives from locales experiencing high immigrant inflows.

Other studies more directly attempt to estimate the effects of immigrant inflows in local markets on wages and employment rather than on internal migration patterns. It will be recalled, that unless careful controls or instrumental variables are found and utilized, such studies are subject to the Borjas criticism of diffusion effects masking the true labor market impact of immigration. For this reason, Borjas has utilized national aggregative data in his work, but that approach too has not been immune from criticism.

Well-known work of local labor markets and immigration includes a series of papers by David Card. In early work, he examined the effects if the 1980 Mariel Boatlift to the Miami area which boosted the local labor supply by some 7 percent.[91] This sudden influx (along with the later influx from Central America due to Hurricane Mitch) might be as close as any to a laboratory controlled experiment. Card failed to find significant local labor market effects. Later work by Card, utilizing 1990 and 2000 census data, similarly examined the employment effects of recent immigration upon native workers and upon earlier immigrants in the same occupation skill groups. In both studies, the results appear to indicate a small adverse impact at the low end of the skills spectrum.[92] A possible rationalization may be that there is significant flexibility in factor proportions utilized by industries and that industries utilizing low skilled labor (including immigrants) were quickly able to adopt even more labor intensive technology and absorb new immigrants without displacing the existing labor force.

In more recent work, Adrianna Kugler and Mutlu Yuksel analyzed the labor market impact of an influx of immigrants from Honduras and other

Natives and Immigrants, 38 DEMOGRAPHY 133, 143 (2001).

90. IMMIGRATION AND THE WORK FORCE: ECONOMIC CONSEQUENCES FOR THE UNITED STATES AND SOURCE AREAS (George J. Borjas & Richard B. Freeman, eds., 1992).

91. David Card, *The Impact of the Mariel Boatlift on the Miami Labor Market*, 43 INDUS. & LAB. REL. REV. 245, 256 (1990).

92. DAVID CARD, CTR. FOR RES. & ANALYSIS OF IMMIGRATION, HOW IMMIGRATION AFFECTS U.S. CITIES 32 (2007), *available at* <http://www.econ.ucl.ac.uk/cream/pages/CDP/CDP_11_07.pdf> (last visited Oct. 17, 2008); David Card, *Immigrant Inflows, Native Outflows, and the Local Labor Market Impacts of Immigration*, 19 J. LAB. ECON. 22, 56-57 (2001). *But see* Joseph Altonji & David Card, *The Effects of Immigration on the Labor Market Outcomes of Less-Skilled Natives*, *in* IMMIGRATION, TRADE, AND THE LABOR MARKET 201, 226 (John M. Abowd & Richard B. Freeman, eds., 1991) (reporting a significant negative impact on local employment conditions in the low skills market).

neighboring Central American countries devastated by Hurricane Mitch (a Category 5 hurricane on the Simpson-Saffir scale) in 1998.[93] The principal way in which Central American men responded to the disaster was to migrate northward and external migration from Honduras and Nicaragua increased manifold.[94] Unlike the Mariel Boatlift whose effects were principally felt in the Miami area, the Mitch immigrants arrived over a wide area of the southern United States in Texas, Florida and California.[95] Thus, the labor market impact was not quite as concentrated as with the Mariel Boatlift, i.e., some natural diffusion had already occurred. Unlike the "Marieltos" (some of whom were repatriated to Cuba later) who were granted work permission in the US only some years later in 1984, the Mitch refugees found a ready response from the Immigration and Naturalization Service (INS). Specifically, within two months of the hurricane, the INS moved to grant Temporary Protected Status (TPS) to the refugees.[96] This procedure had only been used for refugees fleeing war and civil unrest in the past.[97] As a result, the Mitch refugees were quickly legalized and were able to lawfully enter the US labor market in a short period.

Kugler and Yuksel attempt to exploit this influx of immigrants to determine their labor market impact. The authors also take note of the possible endogeniety problems created by the fact that immigrants may have moved to areas where their perceived skills were in high demand.[98] In addition, Kugler and Yuksel also measure the extent, if any, of outmigration of U.S. native workers from affected areas. Utilizing a two stage instrumental variables strategy, the authors arrive at several interesting findings. First, there appear to be no measurable outmigration effects upon either U.S. natives or prior immigrants.[99] Second, they estimate a positive wage impact upon U.S. natives with intermediate and higher education.[100] Third, there is some evidence of weak negative wage effects upon less educated native workers.[101] The latter negative effect is of course, precisely consistent with the neoclassical substitution framework

93. ADRIANNA KUGLER & MUTLU YUKSEL, NAT'L BUREAU OF ECON. RES., WORKING PAPER NO. 14293, EFFECTS OF LOW-SKILLED IMMIGRATION ON U.S. NATIVES: EVIDENCE FROM HURRICANE MITCH (2008).

94. *Id.* at 5-6.

95. *Id.* at 7.

96. *Id.* at 6.

97. *Id.*

98. *Id.* at 2-4.

99. *Id.* at 21.

100. *Id.*

101. *Id.* at 13.

set out earlier. The positive effects upon skilled/educated native workers may be consistent with complementary effects emphasized in a number of papers by Gianmarco Ottoviano and Giovanni Peri.[102] Possibly, the presence of new low skilled labor complements skilled U.S. native labor, increasing the latter's factor productivity and thereby, wages. Direct measurements of factor productivity are difficult to come by and in any case, none are offered in their work.

As indicated above, one of the criticisms of spatial cross section studies is the possible omission from these studies of outmigration by native born workers from affected areas. Other than national studies, one possible way to address this point is to examine data over a period of time so that outmigration effects may be reflected in the data and findings. Two studies, therefore, examine extended periods of time precisely in this vein. Robert Schoeni analyzed data for the 1970s and 1980s and reports the existence of significant labor market effects, although the type of labor market effect may have changed.[103] For example, in the 1970s, low skilled natives experienced large declines in their wage levels due to immigration, but in the 1980s, the adverse impact may have manifested itself in the form a decline in employment instead.[104] It will be recalled however, that neither the 1970s nor 1980s were periods of high immigrant inflows to the same degree as was to occur some years later. Hannes Johannssen and Stephan Weiler examined a shorter and more recent time period, 1998-2002.[105] Consistent with Schoeni, these authors also find measurable adverse labor market effects upon low skilled native workers in metropolitan areas experiencing an immigrant influx.[106] And, as in the previous study, the labor market impact was primarily manifested in the form of withdrawal of U.S. natives from the labor force rather than either in outmigration or a decline in wage rates.[107]

B. Aggregate Studies

Aggregate studies utilizing national data have been conducted by several authors over the years. Such studies may avoid to some extent, the

102. *See, e.g.*, GIANMARCO I.P. OTTAVIANO & GIOVANNI PERI, NAT'L BUREAU OF ECON. RES., WORKING PAPER NO. 12497, RETHINKING THE EFFECTS OF IMMIGRATION ON WAGES 4 (2006).

103. ROBERT F. SCHOENI, THE EFFECTS OF IMMIGRATION ON THE EMPLOYMENT AND WAGES OF NATIVE WORKERS: EVIDENCE FROM THE 1970S AND 1980S, at 20-22 (1997).

104. *Id.* at 21.

105. Hannes Johannssen & Stephan Weiler, *Local Labor Market Adjustment to Immigration: The Roles of Participation and the Short Run*, 35 GROWTH & CHANGE 61, 65 (2004).

106. *Id.* at 74.

107. *Id.*

effects of native outmigration noted earlier. However, as also mentioned previously, the percentage of foreign born labor in the total U.S. labor force still remains under 15 percent. As a consequence, statistical studies utilizing national data need to be powerful enough to isolate and discern potentially small effects on average wages for the entire U.S. labor force.[108] Some of these national studies are noted in Congressional and Executive Office reports.[109]

Two earlier studies are by Robert Topel[110] and Maria Enchautegui.[111] Topel examined the wage gap between low skilled and high skilled men in various regions in the U.S. utilizing 1980s data and concluded that the rising wage premiums to skills was significantly due to immigration at that time, particularly in the western U.S.[112] On the other hand, Enchautegui examined the decline in real wages of workers without a high school diploma over the same period of the 1980s. Decomposition techniques she utilized appear to indicate that perhaps a third or less of the 13 percent decline in the real wages of these skills groups may be attributable to influx of low skilled immigrants on a national level.[113]

Papers by Steven Camarota focus more directly on the relation between the share of immigrants in certain occupations (across the nation) and the earnings of native born U.S. workers in those occupations.[114] Estimates from the log linear regressions reveal the presence of significant negative effects in unskilled labor markets.[115] As expected however, aggregation across occupations moderates the average effects and the impact upon the wages of high skilled labor is either indiscernible or

108. Some of the popular literature takes a different view and ascribes stagnancy in real wages in the U.S. in or the relative decline in certain industries in recent years predominantly to immigration rather than to the nature of technological change and to the winds of globalization. *See, e.g.*, PATRICK BUCHANAN, STATE OF EMERGENCY: THE THIRD WORLD INVASION AND CONQUEST OF AMERICA 31-35 (2006); *see also* MARK KRIKORIAN, THE NEW CASE AGAINST IMMIGRATION: BOTH LEGAL AND ILLEGAL 133-45 (2008) (presenting a more scholarly argument).

109. *See* CEA, *supra* note 80, at 7; LINDA LEVINE, CONG. RES. SERV., IMMIGRATION: THE EFFECTS ON LOW-SKILLED AND HIGH-SKILLED NATIVE-BORN WORKERS 4-7 (2007).

110. Robert H. Topel, *Regional Labor Markets and the Determinants of Wage Inequality*, 84 AM. ECON. REV. 17 (1994).

111. María E. Enchautegui, *Immigration and Wage Changes of High School Dropouts*, MONTHLY LAB. REV., Oct. 1997, at 3.

112. Topel, *supra* note 110, at 21-22.

113. Enchautegui, *supra* note 111, at 8.

114. STEVEN A. CAMAROTA, CTR. FOR IMMIGRATION STUDIES, THE WAGES OF IMMIGRATION: THE EFFECT ON LOW-SKILLED LABOR MARKET (1998), *available at* <http://cis.org/articles/1998/wage study/wages.pdf> (last visited Oct. 17, 2008); Steven A. Camarota, *The Effect of Immigrants on the Earnings of Low-Skilled Native Workers: Evidence from the June 1991 Current Population Survey*, 78 SOC. SCI. Q. 417 (1997).

115. Camarota estimates that the mean effect on wages of low skilled native workers is approximately 12 percent. CAMAROTA, *supra* note 114, at 5.

slightly positive.[116] The latter effect, it will be recalled, is consistent with labor complementarities discussed earlier.

A number of papers by George Borjas are well cited in this area.[117] Borjas utilizes national data and focuses not on wage inequality between low and high skilled workers, but on the secular decline in real wages of low skilled workers in the U.S. over a number of years. Specifically, inflows of low skilled immigrant labor over 1980-95 caused at least a 5 percent decline in the real wages of low skilled workers in the U.S.[118] More sophisticated later work by the same author utilizing a 1960 to 2000 data set corroborates these findings across various skill groups, including those at the bottom of the skills ladder.[119] The work by Borjas remains the principal weapon in the arsenal of those ascribing the relative ill fortunes of labor in various skill categories to unchecked immigrant inflows.

Subsequently, Borjas' work has been extended by Gianmarco Ottaviano and Giovanni Peri in a number of ways. First, these authors utilize panel data over 1990 to 2004, and workers are disaggregated more finely according to both education and experience.[120] Second, labor demand functions for different categories of workers are derived in a general equilibrium framework rather than being imposed exogenously in "reduced form."[121] And finally, capital stock is permitted to be fully endogenous.[122] Ottaviano and Peri's results are provocative but not fundamentally at odds with those of other scholars. Specifically, unlike the significant real wage losses in the low skilled segment of the market,[123] Ottaviano and Peri also find adverse real wage effects but the quantitative magnitudes are much smaller with a barely discernible real wage loss of 1 to 2 percent due to immigration.[124] But, unlike other national studies, which find aggregate effects upon the national labor force to be negligible, Ottaviano and Peri find a measurable increase in the mean wages of all U.S. workers.[125] This is due to the presence of strong complementarities with intermediate and highly skilled U.S. labor. When the results are

116. *Id.*

117. *E.g.* Borjas, *Labor Demand Curve*, *supra* note 86.

118. *Id.* at 1369, tbl. IX (mean estimated impact for all high school dropouts and high school graduates is 5.8 percent).

119. *Id.*; Borjas, *Native Internal Migration*, *supra* note 86.

120. OTTAVIANO & PERI, *supra* note 102, § 3.1.

121. *Id.* at 2-3.

122. *Id.* at 5. In fact, Ottaviano and Peri assume that full capital stock adjustment takes place within one year. Some may find this period to be excessively short for full adjustment of fixed capital stock.

123. *See, e.g.*, Borjas, *Labor Demand Curve*, *supra* note 86, at 1370 (estimating 8.9 percent reduction in wages for high school dropouts.

124. OTTAVIANO & PERI, *supra* note 102, tbl. 8.

125. *Id.* at 34.

disaggregated according to U.S. born labor and prior immigrants, these authors find a significant adverse impact upon prior immigrants.[126] However, because U.S. immigration policy (unlike that in Canada, Australia and now the U.K.) is very largely family based, poll after poll finds that prior immigrants at all skill levels continue to support new immigration despite its economic costs.[127] Presumably, the non-economic benefits of reunification with family outweigh the economic losses for this group in its calculus of life.

C. Effects on the High Skills Market in the U.S.

There are relatively few studies that examine the effect of recent immigration on the high skills labor market in the U.S. This is not surprising since immigrants are overwhelmingly low skilled; they cannot therefore exert competitive substitution effects upon highly skilled U.S. workers.[128] As discussed earlier, low skilled labor complements high skilled labor, permitting the latter to specialize more completely in knowledge intensive and high productivity activities.[129] The presence of such complementarities has been validated in one form or another by various scholars, including Ottaviano and Peri.[130]

What about the effects of immigration of high skilled foreign labor? Clearly, in this case there will be no complementation of native high skilled labor, and substitution effects may look large. Should this be the case, one would expect the high skilled labor market in the U.S. to experience adverse effects following an inflow of direct foreign competition.

A recent paper by George Borjas uses data from the Survey of Earned Doctorates and Survey of Doctoral Recipients in the U.S. to demonstrate that the inflow of foreign doctoral students into the U.S., most of whom

126. *Id.*

127. *E.g.* JEFFREY M. JONES, GALLUP, FEWER AMERICANS FAVOR CUTTING BACK IMMIGRATION (2008), *available at* <http://www.gallup.com/poll/108748/Fewer-Americans-Favor-Cutting-Back-Immigration.aspx> (finding that the majority of Latinos, nearly half of whom are immigrants, favor new immigration); PEW HISPANIC CENTER, 2007 NATIONAL SURVEY OF LATINOS: AS ILLEGAL IMMIGRATION ISSUE HEATS UP, HISPANICS FEEL A CHILL 2-3 (2007), *available at* <http://pewhispanic.org/files/reports/84.pdf> (reporting that Latino immigrants view new immigration whether legal or illegal as having a positive impact).

128. *See, e.g.*, Borjas & Katz, *supra* note 81, at 22-24 (pointing out that among the recent immigrants to the U.S., those from Mexico (who comprise a large proportion of the total) are most likely at the bottom of the skill and education spectrum).

129. For instance, the provision of housekeeping services, lawn care, etc. by low skilled labor may free up valuable time resources for high skilled labor enabling the latter to raise effort levels in skilled activities.

130. OTTAVIANO & PERI, *supra* note 102, at 34 (showing positive overall impact of immigration on native wages).

enter the U.S. labor market after successfully obtaining Ph.D. degrees, leads to significant negative effects upon the salaries of competing workers in the specific fields in question, whether the competing workers are U.S. born, prior immigrants, or both.[131] The estimated elasticity is approximately -0.3 for all doctorates in the particular fields considered.[132] Some twenty three separate fields in the sciences, engineering and some social sciences are included in the sample.[133] The total numbers involved are naturally small; approximately 41,000 doctorate degrees in all fields were awarded by U.S. universities,[134] but even when stratified across twenty-three fields, the sample sizes utilized are large enough for accurate statistical analysis.

There appear to be a few studies specific to computer programmers/software designers entering the U.S. under the H-1B specialty occupation visa.[135] The H-1B visa was created in 1990 as a guest worker program to permit U.S. industry to alleviate shortages in specific technical skills. Either a college degree (not a Ph.D.) or equivalent professional experience is required for the petitioning employer to obtain such a visa for a foreign beneficiary, who must be paid the "prevailing wage rate" for particular occupation and locale.[136] Utilizing data on approved Labor Condition Applications (LCAs) from the U.S. Department of Labor for 2004, John Miano found that foreign born H-1B professionals were paid significantly less than their U.S. counterparts.[137] Although the author does not directly address the effects of the H-1B program on work conditions of U.S. workers, it seems clear that salaries of existing U.S.-born workers in these occupations were not depressed.[138] The findings are consistent most likely with the fact that U.S. employers utilized the H-1B program as a source of inexpensive labor segmented from their U.S. counterparts. It may also be that the shortage of such specialty workers in

131. Borjas, *Labor-Market Impact*, *supra* note 82, at 59.

132. *Id.*

133. The percentage of foreign born doctorates in particular fields varies from around 5 percent in psychology to close to 50 percent and over in civil and mechanical engineering and about 40 percent in computer and mathematical sciences. *Id.*, tbl. I. The medical professions do not grant Ph.D.s and are not reflected in the data. It should not be surprising that fields that require extensive verbal articulation such as psychology have a relatively low percentage of foreign born doctorates compared with the mathematical or computer sciences, which do not require as much verbal English proficiency.

134. *Id.* at 57.

135. *See* JOHN MIANO, CTR. FOR IMMIGRATION STUD., THE BOTTOM OF THE PAY SCALE: WAGES FOR H-1B COMPUTER PROGRAMMERS (2005), *available at* <http://www.cis.org/articles/2005/back1305.pdf> (last visited Oct. 18, 2008); Zavodny, *supra* note 73, at 1.

136. 8 U.S.C. § 1182(n)(1)(A) (2000).

137. MIANO, *supra* note 135, at 1 (reporting that H-1B workers in computer programming were paid approximately $13,000 less than Americans in the same occupation and state).

138. *Id.*, tbl. 2.

the U.S. was more illusory than real; had there been a genuine and pressing shortage, perhaps, the wages of all H-1B professionals would have been bid upward. Another study concluded that the H-1B program may not affect wages of U.S. born workers, but may have increased their unemployment rate, or at least job search times.[139] A possible reason for the conflicting evidence for specialty occupations and those for Ph.D.s may be that Ph.D. markets may be small, and the effects of foreign competition correspondingly much more evident than in the computer programmer market, which is much larger. In addition, H-1B workers are temporary guest workers tied by their visa restrictions to specific employers, whereas Ph.D.s who enter the U.S. market usually do so under the first preference of permanent-employment-based immigration and are free to choose and move between employers.

In any case, it is amply clear that high skills markets in host countries are characterized by substitution effects, and to that extent, are adversely affected when such effects are sufficiently discernible.

V. RESULTS FROM OTHER COUNTRIES

In this Section, I briefly review empirical results for a two countries other than the U.S.: Germany and the U.K. There appear to be relatively few studies published in English for other countries.[140]

A. Germany

Labor markets in Germany have received a good deal of attention.[141] It is generally agreed by most scholars that German labor markets are characterized by much more structural rigidity than the U.S. or U.K. To this extent, adverse labor market shocks in Germany are likely to result in

139. Zavodny, *supra* note 73, at 10.

140. *See* Rachel M. Friedberg, *The Impact of Mass Migration on the Israeli Labor Market*, 116 Q. J. ECON. 1373 (2001; Jennifer Hunt, *The Impact of the 1962 Repatriates from Algeria on the French Labor Market*, 45 INDUS. & LAB. REL. REV. 556 (1992); *see also* ABDURRAHMAN AYDEMIR & GEORGE J. BORJAS, NAT'L BUREAU OF ECON. RES/, WORKING PAPER NO. 12327, A COMPARATIVE ANALYSIS OF THE LABOR MARKET IMPACT OF INTERNATIONAL MIGRATION: CANADA, MEXICO, AND THE UNITED STATES (2006).

141. *See, e.g.*, FRANCESCO D'AMURI ET AL., NAT'L BUREAU OF ECON. RESEARCH, WORKING PAPER NO. 13851, THE LABOR MARKET IMPACT OF IMMIGRATION IN WESTERN GERMANY IN THE 1990S (2008); K.F. ZIMMERMAN ET AL., IMMIGRATION POLICY AND THE LABOR MARKET: THE GERMAN EXPERIENCE AND LESSONS FOR EUROPE (2007); ALBRECHT GLITZ, CTR. FOR RESEARCH & ANALYSIS OF MIGRATION, THE LABOUR MARKET IMPACT OF IMMIGRATION: QUASI-EXPERIMENTAL EVIDENCE (2006); Thomas Bauer & Klaus F. Zimmerman, *Unemployment and Wages of Ethnic Germans*, 37 Q. REV. ECON. & FIN. 361 (1997). Well known think tanks and research institutes in Germany such as the IZA in Bonn produce a large quantity of high quality research (in both English and German) relating to labor market and migration.

an increase in unemployment rather than a decline in wages and in fact, recent empirical research bears this out.[142]

Germany experienced two large inflows of immigrants after the end of World War II.[143] These labor market shocks can be viewed as large scale variations of the Mariel Boatlift in the U.S., although they occurred over a somewhat longer time frame. The first inflow began in the mid-1950s with the recruitment of guest workers (*Gastarbeiter*) from southern and eastern Europe for reconstruction of German industry following its devastation during the War.[144] The temporary workers were not of German ethnic ancestry and assimilated poorly in German society and culture.[145]

The guest workers were intended to be temporary with no rights to family re-unification.[146] Nevertheless, many such workers circumvented the ban on accompanied stays, which was rarely enforced, and continued to stay permanently in Germany with their families.[147] Neither they nor their descendants could ever aspire to participate in German civic life through citizenship since German citizenship was limited to *jus sanguine* principles until after 1999.[148] Finally, after the economic downturn in 1973 following the first OPEC crisis and under pressure by powerful German unions, the German government moved to ban further recruitment of temporary workers.[149] By that time, the German Federal Statistical Office estimated that the foreign born population accounted for 6.4 percent of West Germany's total population.[150]

After the end of the Cold War, Germany resumed its policy of permitting temporary migration from Eastern and Southern Europe (including Turkey).[151] Parallel to this were two other labor inflows – those of ethnic Germans with German citizenship who had lived abroad for a

142. D'AMURI ET AL., *supra* note 141, at 26 (showing immigration to have a negative impact on employment but only a modest wage impact); GIANMARCO I.P. OTTAVIANO & GIOVANNI PERI, NAT'L BUREAU OF ECON. RES., WORKING PAPER NO. 14188, IMMIGRATION AND NATIONAL WAGES: CLARIFYING THE THEORY AND THE EMPIRICS (2008).

143. D'AMURI ET AL., *supra* note 141, at 4.

144. *Id.*

145. *See, e.g.*, CHRISTIAN JOPPKE, IMMIGRATION AND THE NATION-STATE 188 (1999) ("[T]he rejection of assimilation is the one continuity in the unprincipled, wavering German approach to immigrant integration.").

146. *Id.* at 67.

147. *See* D'AMURI ET AL., *supra* note 141, n.5.

148. *E.g.*, MICHAEL FERTIG & CHRISTOPH M. SCHMIDT, IZA DISCUSSION PAPER NO. 286, FIRST- AND SECOND-GENERATION MIGRANTS IN GERMANY: WHAT DO WE KNOW AND WHAT DO PEOPLE THINK? (2001), *available at* <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=267223>; JOPPKE, *supra* note 145, at 204.

149. D'AMURI ET AL., *supra* note 141, at 4.

150. *Id.*

151. *Id.* at 5.

long period and also former East Germans who decided to relocate to the western part of the newly united country.[152] Over the years 1991 to 2001, some two million former East Germans moved to the West,[153] while the flow of ethnic Germans (not from former East Germany) accounted for another nearly two million persons.[154] By 2006, foreign born citizens accounted for 10 percent of the German population, but in quantitative terms, Germany had the highest number of foreign born persons in Western Europe.[155]

Recent work by Frecesco D'Amuri and his coauthors is instructive.[156] These authors extended the general equilibrium framework of Ottaviano and Peri mentioned previously and utilize data over the period of 1987 to 2001 to determine the effects of sharp increase in the non-West German share of workers in the total German labor force.[157] Migrants arrived from both former East Germany and southern European countries. In addition, large numbers of ethnic Germans holding German nationality under the *jus sanguine* principle but living abroad returned to the united Germany. All three groups were treated as immigrants for purposes of analysis, and the share of all immigrants in the total labor force increased from 9.3 percent in 1987 to over 13 percent in 2001.[158] The authors separated the effect of migration upon natives and on prior immigrants in former West Germany.[159] Panel data analysis disaggregated by education and experience indicated that the mass migration had no discernible impact upon wages or employment rates of native West Germans (i.e. the new immigrants were viewed as being very distant substitutes), whereas prior immigrants to West Germany experienced employment losses but not adverse wage effects.[160] This finding is consistent with structural rigidities in the German labor market and with prior work in this area.[161]

152. *Id.*

153. Pressemitteilung [Press Release] No. 414, Statistisches Bundesamt Deutschland [German Fed. Bureau of Statistics], Wanderung von Ost- nach Westdeutschland Schwächt sich weiter ab [Migration from East to West Germany Continues to Fall] (Sept. 29, 2006), *available at* <http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/DE/Presse/pm/2006/09/PD06__414__12711,templateId=renderPrint.psml>.

154. Bundesverwaltungsamt [German Fed. Admin.], Jahresstatistik Aussiedler und deren Angehörige [Yearly Statistics of Immigrants and their Families] (2003).

155. D'AMURI ET AL., *supra* note 141, at 2.

156. *Id.* For a more detailed discussion of the German labor market and immigration see generally ZIMMERMAN ET AL., *supra* note 141.

157. D'AMURI ET AL., *supra* note 141, at 3.

158. *Id.* tbl. 4.

159. *Id.* at 3.

160. *Id.* §§ 6.1-6.2.

161. *See, e.g.*, GLITZ, *supra* note 141, at 46; Joshua D. Angrist & Adrianna D. Kugler, *Protective or Counter-Productive? Labour Market Institutions and the Effect of Immigration on E.U. Natives*, 113

B. United Kingdom

As may be expected, there is a considerable amount of literature on the effects of immigration on U.K. labor markets, [162] as well as on social cohesion, public congestion, etc.[163] Marco Manacorda and his coauthors note that similar to Germany, despite the increase in immigration to the U.K., wages of U.K.-native born workers have not exhibited any measurable effect. However, prior immigrants to the U.K., as in Germany, have experienced an adverse impact.[164]

A 2008 report issued by the Select Committee on Economic Affairs of the House of Lords took issue with the position of the British Government that immigration is necessary to reduce the number of vacancies in the British labor market,[165] that immigration has generated fiscal benefits for public coffers,[166] and that at least some portion of the increase in per capita GDP is due to immigration.[167] The British Government's positive view of the economic benefits of immigration is similar to the sanguine views expressed by the Council of Economic Advisors to the President of the United States.[168]

After extensive consultation with academics and researchers, the House of Lords Committee conducted a detailed analysis of immigration's economic impact and of the government position and arrived at several conclusions.[169] First, there is a pressing need for improving the current

ECON. J. 302, 328 (2003). *But see* J. P. De New & K. F. Zimmermann, *Native Wage Impacts of Foreign Labor: A Random Effects Panel Analysis*, 7 J. POPULATION ECON. 177, 191 (1994) (finding immigration to have an overall adverse effect on wages); Jörn-Steffen Pischke & Johannes Velling, *Employment Effects of Immigration to Germany: An Analysis Based on Local Labor Markets*, 79 REV. ECON. & STAT. 594, 604 (1997) (finding no significant effect on employment rates).

162. *See, e.g.*, CHRISTIAN DUSTMANN ET AL., DEP'T OF ECON. & CTR. FOR RES. & ANALYSIS OF MIGRATION, IMMIGRATION AND WAGES: NEW EVIDENCE FOR BRITAIN (2007), *available at* <http://www.iza.org/conference_files/SUMS2007/frattini_t3341.pdf> (last visited Oct. 19, 2008); MARCO MANACORDA ET AL., CTR. FOR ECON. PERFORMANCE, DISCUSSION PAPER NO. 754, THE IMPACT OF IMMIGRATION ON THE STRUCTURE OF MALE WAGES: THEORY AND EVIDENCE FROM BRITAIN (2006), *available at* <http://cep.lse.ac.uk/pubs/download/dp0754.pdf> (last visited Oct. 19, 2008); SELECT COMM. ON ECON. AFFAIRS, HOUSE OF LORDS, THE ECONOMIC IMPACT OF IMMIGRATION (2008), *available at* <http://www.publications.parliament.uk/pa/ld200708/ldselect/ldeconaf/82/82.pdf> (last visited Oct. 19, 2008).

163. *See, e.g.*, COMMUNITIES & LOCAL GOV'T COMM., HOUSE OF COMMONS, COMMUNITY COHESION AND MIGRATION (2008), *available at* <http://www.publications.parliament.uk/pa/cm200708/cmselect/cmcomloc/369/369i.pdf> (last visited Oct. 19, 2008) (examining effect of immigration on social cohesion in the UK).

164. MANACORDA ET AL., *supra* note 162, at 18.

165. SELECT COMM., *supra* note 162, ¶¶ 223-30.

166. *Id.*, ¶¶ 231-34.

167. *Id.*, ¶¶ 211-22.

168. *See* CEA, *supra* note 80, at 1.

169. Note at the outset that since immigration from the European Economic Area (E.U. twenty-seven plus Norway and Lichtenstein) is not subject to controls, analysis of immigration to the U.K. was

entirely inadequate migration statistics in order to conduct analysis and to make informed policy judgments.[170] While it is known that immigrants in the U.K. are highly concentrated in London and to some extent Yorkshire and Humber (together these areas may account for about three-fourths of all new immigrant settlement from 1991 to 2006), there is very scant data on local levels other than for London.[171] In addition, record keeping of emigration still appears to be very unsatisfactory.[172] Improved data collection and access will be especially necessary as the British Government phases in its new points based starting in 2008.[173] With the introduction of the merit based points system, Britain joins Canada and Australia, leaving the U.S. as the sole, large, advanced country in the English speaking world to rely principally on family based chain migration. Second, the Report questions the wisdom of the British Government's reliance on the number of vacancies in the British job market as indicating a need for additional migration.[174] A certain number of vacancies in the job market are consistent with an active and dynamic labor market.[175] Third, the Report rejects the government's position that immigration may also be necessary to diffuse the "pension time bomb" (referring to the impending insolvency of the pension funds scheme).[176] Immigrants too will draw pensions as they age in Britain. At most, an influx of tax contributing working immigrants can postpone the day of reckoning without an increase in the retirement age and in tax rates.[177] For this reason, the long term fiscal impact of increased immigration is likely to be small at the national level.[178] This is because while the overall employment rate of immigrants is currently lower than for U.K.-born natives (68 percent versus 75 percent), the gap is declining,[179] and the additional incremental drain of

limited to source countries outside the EEA. SELECT COMM., *supra* note 162, ¶ 8.

170. *Id.*, ¶¶ 39-43.

171. *Id.*, ¶ 22. It is also known that since 2004, immigration from the A8 countries (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovenia and Slovakia) comprises a full one-third of all new immigrants. *Id.* fig. 2, at 16.

172. *Id.* ¶ 27.

173. *See id.*, ¶ 196.

174. *Id.* ¶ 224.

175. *Id.*

176. *Id.*, ¶158.

177. *Id.* For an interesting discussion of portability of pensions across countries or their possible role in encouraging return emigration (if this were desirable), see generally JOHANNES KOETTL, SOCIAL PROTECTION DIV, WORLD BANK, DISCUSSION PAPER NO. 614, THE RELATIVE MERITS OF SKILLED AND UNSKILLED MIGRATION, TEMPORARY AND PERMANENT LABOR MIGRATION, AND PORTABILITY OF SOCIAL SECURITY BENEFITS (2006), *available at* <http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2006/11/16/000310607_20061116143422/Rendered/PDF/380070SP061401PUBLIC1.pdf> (last visited Oct. 19, 2008).

178. This finding is similar to that for the U.S. *See generally* HANSON, *supra* note 77.

179. SELECT COMM., *supra* note 162, ¶ 34.

immigration on public coffers is diminishing.

Turning to the direct labor market impact of immigration, the Report carefully points out that the labor market effects of immigration are best analyzed separately for four groups: source country residents who are left behind; native born U.K. workers; prior immigrants residing in the U.K.; and the new migrants themselves.[180] There is little question that new migrants are large economic beneficiaries once they enter the British labor market. Wages, even when adjusted for the cost of living in Britain or other advanced countries are several times those in the source countries.[181] The impact upon residents remaining in the source country is very likely positive. Remittances sent home by foreign migrants are often a significant source of income for families remaining in the source country.[182] In smaller source countries, the exodus of labor may also ameliorate excess supply in labor markets. The social cost of migration is of course the "brain drain" which is more properly a subject of another paper on emigration.[183] As observed for the U.S., the Report points out that immigration may have a positive effect on wages for complementary labor in principle,[184] and a negative impact on substitute labor in the short run.[185] If labor markets are structurally rigid, the principal effect may be upon unemployment rather than on wage levels. If rising aggregate unemployment is the short term impact, existing inflationary pressures may be moderated and monetary policy loosened.[186]

Empirical evidence for Britain is cited in an Ernst and Young ITEM Club study released in December 2007. The study indicates that the short term impact on per capita GDP in Britain is either negligible or slightly negative.[187] As pointed out in the House of Lords Report and in some other

180. *Id.*, ¶ 48.

181. *Id.*, ¶ 47.

182. *See generally* Richard H. Adams, Jr., *Remittances, Poverty, and Investments in Guatemala, in* INTERNATIONAL MIGRATION, REMITTANCES, AND THE BRAIN DRAIN 53 (Caglar Ozden & Maurice Schiff eds., 2005); Dean Yang & Claudia A. Martínez, *Remittances and Poverty in Migrants' Home Areas: Evidence from the Philippines, in* INTERNATIONAL MIGRATION, REMITTANCES, AND THE BRAIN DRAIN, *supra*, at 81.

183. The "brain drain" refers to the exodus of skilled individuals from source countries or those who acquired secondary education there and then departed as foreign students (never to return and contribute to taxes) to advanced countries. The "drain" is the public resources expended upon education the individuals in the source countries that will not be repaid with by way of tax contributions later or by participation of these individuals in civic life at home. *See generally* INTERNATIONAL MIGRATION, REMITTANCES, AND THE BRAIN DRAIN, *supra* note 182; PHILIP MARTIN ET AL., MANAGING LABOR MIGRATION IN THE TWENTY-FIRST CENTURY (2006).

184. *Id.*, ¶ 55.

185. *Id.*, ¶ 54.

186. *See id.*, ¶ 57.

187. ERNST & YOUNG, ITEM CLUB SPECIAL REPORT, MIGRATION AND THE UK ECONOMY 7 (2007).

studies,[188] isolating the effects of immigration upon wages is confounded by endogeniety problems; for example, immigrants are attracted to areas of economic growth and demand expansion, i.e., wage growth and demand expansion fuels inbound immigrant flows, which in turn feed back upon market clearing wages (or unemployment rates). Appropriate instrumental variable techniques are often utilized to find suitable regressors to circumvent the estimation bias that may result from such two way causality.[189]

VI. CONCLUSION

In this contribution, I have selectively reviewed some of the large literature dealing with the labor market impact of international migration upon developed host countries. It should be observed that there is also a large amount of migration to the oil rich Middle Eastern countries (principally from South and East Asia), but the issues raised by this variety of migration are of a different nature than for advanced countries where there may be displacement of native born labor. In addition, this chapter has not dealt with the effects of migration upon source or sending countries, i.e. the "brain drain" or in some cases the "brain gain." Finally, I have also not reviewed the considerations and issues involved in intra-E.U. labor mobility. Labor mobility within the E.U. is one of the "pillars" of the E.U. Treaty and was never expected to raise the same issues of native labor displacement by low cost foreign labor as the type of traditional immigration from less developed to advanced countries discussed in this contribution.

Professor Ruben J. Garcia[*]**:** I am very pleased to be commenting on this paper and very thankful to Ken for inviting me here to comment on this paper by Professor Jagdeep Bhandari. At the outset, I should say that I am not an economist, but I have a long-standing interest in the relationship between Mexican and other forms of immigration to labor markets and labor law. I get from Professor Bhandari's paper a real sense of the reasons and some of the data for the wage gap between Mexican immigrants and their cohorts, and why they might lag behind other immigrant groups and non-immigrant groups. Of course, as with any paper, I start thinking about many of the other causes and other reasons for this gap that are not in the paper, just because there is a limited amount of data on them. First, and

188. SELECT COMM., *supra* note 162, ¶ 70; Christian Dustmann & Francesca Fabbri, *Immigrants in the British Labour Market*, 26 FISCAL STUD. 423, 423-25, 461 (2005).

189. *E.g.* Dustmann & Fabbri, *supra* note 188, at 446-58 (describing methodology and analysis).

* Associate Professor of Law, California Western School of Law.

second, there is a limited amount of real answers on many of these questions. Being a legal scholar, I think about some of the legal causes for this wage gap that Professor Bhandari astutely identifies. Taking the long view as I try to do, the main thing that I would like to see, and of course again this is probably not the right paper for it, is a comparison between how Mexican immigrants have done compared to other immigrant groups. In the long view, we have the immigrant waves of the late Nineteenth Century from European countries and the different social environment, the different regulatory and legal environment present when those immigrant groups arrived in the country. And we can go back to the New Deal, the National Labor Relations Act of 1935, and the rise of the labor movement and how that affected immigrant groups and wages. Now we have private sector unionization down near 8 percent and wage stagnation, which is affecting not only Mexican immigrant groups but also many other low skilled, low wage service workers.

This context is in the backdrop of much of what Professor Bhandari has discussed here today in his paper, and he does a good job marshalling some of the main economic evidence in terms of educational attainment and skill level and its relationship to wages. But I cannot help but think about this in a climate of increased upset over Mexican immigration in the U.S. and the growing questions in the last several years about why Mexico cannot get its economic act together. So it is in this context that I want to add a few more observations, perhaps six or seven observations, to what may be responsible for the gap in Mexican undocumented wage differentials and legal immigrant wage differentials.

First, of course, there is the relationship between discrimination and wage stagnation. This is, I think, an understudied problem in general, but particularly the kind of wage gap that we have seen is at least understudied compared to such studies on gender and wage gap and pay disparities. There are a lot of interesting questions about that and also still some interesting legal developments on the wage gap between whites and non-whites, or immigrants and non-immigrants.

Second, there is the question of how particular sectors might come at this differently. I think in his paper Professor Bhandari breaks out some different sectors, but clearly if we know anything about the debate on immigration policy in the last year or so we see a large demand for immigrants or labor in general in certain sectors of the economy, particularly agriculture. The temporary agricultural workers program (H-2A) and the agricultural jobs bill are areas in which there is a large demand for immigrant workers and workers in general. Studying the agricultural

sector in particular might be illuminating in figuring out whether it is really just a question of supply and demand or whether there might be other factors out there.

Third, the concept of economic assimilation which Professor Bhandari offers is very interesting, and in terms of the factors or the reasons which might explain this lack of economic assimilation, I cannot help but think about the debate in the U.S. about the assimilation of Mexican workers or Mexican immigrants and whether they assimilate quickly enough. There is not a whole lot of evidence out there for the claim that Mexican workers assimilate less, but a lack of assimilation may also address or at least explain some of the gaps that Professor Bhandari identifies.

Then there is the question of bargaining power and related to that, the relationship between the decline of unionization in the U.S. and whether Mexican immigrant workers have borne that decline disproportionately to other immigrant groups. That question of bargaining power asks whether were there to be a change in the legal environment making it easier to organize immigrant workers or all workers for that matter, would we see a closing of this gap between immigrant workers and non-immigrant Mexican workers. That is something else that remains to be seen and may also explain some of the gaps that are discussed here.

The fifth factor is the geographic proximity of the U.S. to Mexico and how that might impact not only the economic assimilation of Mexican immigrants but also their educational attainment – in other words, is it more likely that immigrants who come here from far away are more likely to be able to achieve education and not travel back and forth as much as other immigrant workers; is that something else that may come into play?

And then finally, there is a question of what the impact of NAFTA is, which goes back to what Professor Hyde was talking about. Should the question of immigrant workers be broken out of the discussion about NAFTA? I know that the paper Professor Bhandari has presented is really about low skilled workers but I think a lot of the questions about the effect of NAFTA on Mexican immigrant potential and Mexican immigrant outcomes are certainly something worth further study. As many of you know, there is a NAFTA Visa category and researching whether there are similar wage gaps or similar wag lags in the NAFTA Visa program for professional workers may shed some light on the market for low-skilled workers. That is something I think would be interesting to see.

I will just close with a few policy questions that I think might be raised by the paper, and again, these are for general discussion. I am certainly not thinking that Professor Bhandari will be interested in

addressing all of these, but I think that certainly the paper is timely in that it continues or it is placed in this debate about the following economic questions that we face as a society.

First, what will be the impact of a continued number – whatever the number is that you believe, eleven, twelve, fifteen, or eighteen million – of undocumented workers in the U.S.? That of course is a question, as Professor Bhandari has alluded to, about whether there is wage competition between low-skilled high school dropouts and immigrants and what effect those workers might have on authorized Mexican workers as well.

Second, what effect would the legalization or regularization of these undocumented workers have in the country and on the economy? The idea is that wages will increase from legalization. Do we have any evidence, for example, of the last time that a number of workers were regularized since 1986 in the Immigration Reform and Control Act? Will that be an outcome of whatever ultimately occurs in terms of immigration reform? There is also the question of what effect raises in the minimum wage will have on the wages of low-skilled Mexican immigrants. And, here of course we have the long economic debate about the displacement of low-skilled workers by raises and increases in the minimum wage. Will we see that the gap that Professor Bhandari has identified increase in places like California, for example, where the minimum wage is now $8 an hour or more broadly after the recent rise in the federal minimum wage?

And then, finally, what effect would an increased number of temporary workers, guest workers, have on the wages of low-skilled immigrant workers? Of course, the complications or complexities of these questions are probably why we did not get any real immigration reform in 2007, but with a new political climate we will see what develops. I am eager to see how Professor Bhandari develops his data in the course of this new policy debate on immigration and labor in the coming years. Thank you very much.

Professor Richard N. Block*: The following is the paper of Professor Block.

I. INTRODUCTION

Questions surrounding international labor standards have long been a matter of intense debate among politicians, academics, business people,

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and trade unionists. Politicians in many countries are caught in cross-currents among businesses, who advocate minimal regulation, labor leaders, whose interest in international labor standards depends on whether workers in their countries are seen as potential beneficiaries from or victims of international labor standards, and their own concerns about the effect of international labor standards on economic development.[190] The academic view of international labor standards depends on how one views the efficacy of unregulated markets.[191]

Generally, matters relating to international labor standards are raised in the context of international trade agreements. The World Trade Organization, the international organization that governs international trade with the goal of minimizing preferences, has resolved internal debates over international labor standards by determining that it will not address them; disputes over international labor standards are to be addressed by the International Labor Organization (ILO).[192] In the U.S., the debate over the ratification of the North American Free Trade Agreement (NAFTA) revolved around concerns over whether relatively low labor standards in Mexico would give Mexican companies an "unfair" advantage vis-à-vis the United States companies.[193] This debate continues, as union leaders contend that declining employment and stagnant wages in U.S. manufacturing are due substantially to worker displacement resulting from NAFTA.[194]

Much of the debate over international labor standards is based on the application of the neoclassical economic model to the imposition of international labor standards. This paper will provide an overview of the economic perspective on international labor standards. The second section

190. *See, e.g.*, Gary S. Fields, *International Labor Standards and Decent Work: Perspectives from the Developing World*, *in* INTERNATIONAL LABOR STANDARDS: GLOBALIZATION, TRADE, AND PUBLIC POLICY 61, 61-80 (Robert J. Flanagan & William B. Gould eds., 2003); Kristi Schaeffer, Note, *MERCOSUR and Labor Rights: the Comparative Strengths of Sub-Regional Trade Agreements in Developing and Enforcing Labor Standards in Latin American States*, 45 COLUM. J. TRANSNAT'L L. 829 (2007).

191. *See, e.g.*, ORG. ECON. COOPERATION & DEV., TRADE, EMPLOYMENT, AND LABOUR STANDARDS: A STUDY OF CORE WORKERS' RIGHTS AND INTERNATIONAL TRADE (1996); T.N. Srinivasan, *International Trade and Labour Standards from an Economic Perspective*, *in* CHALLENGES TO THE NEW WORLD TRADE ORGANIZATION 219, 219-44 (Pitou van Dijck & Gerrit Faber eds., 1996); Richard. N. Block et al., *Models of International Labor Standards*, 40 INDUS. REL. 258 (2001).

192. WORLD TRADE ORG., LABOUR STANDARDS: CONSENSUS, COHERENCE, AND CONTROVERSY, <http://www.wto.org/english/thewto_e/whatis_e/tif_e/bey5_e.htm> (last visited Nov. 14, 2008).

193. *See generally* Block et al., *supra* note 191.

194. *NAFTA at Year Twelve: Hearing Before the S. Subcomm. on International Trade of the S. Comm. on Finance*, 109th Cong. 31-35 (2006) (statement of Thea M. Lee, Policy Director, AFL-CIO), <http://finance.senate.gov/hearings/38636.pdf.>; *U.S.-Peru Trade Promotion Agreement, Hearing Before the Sen. Finance Comm.*, 109th Cong. (2007) (statement of Thea M. Lee, Policy Director, AFL-CIO), <http://finance.senate.gov/sitepages/hearing091107.htm>.

of the paper will establish a definition of "international labor standards." The third section of the paper will briefly analyze the economic arguments that criticize and support the establishment of international labor standards. The fourth section will analyze two models of international labor standards; those promulgated by the ILO and those promulgated by the European Union. The fifth section will provide a summary and conclusions.

II. DEFINITION OF INTERNATIONAL LABOR STANDARDS

For the purposes of this paper, a labor standard will be defined as a

> mandatory, governmentally established procedure, term or condition of employment, or employer requirement that is universal (covering all employers within the jurisdiction except those excluded via statute) and that is designed to protect employees from treatment at the workplace that society considers unjust with legal sanctions upon an employer that fails to comply with the standard.[195]

There are three key points that should be noticed. First, the standards are established by government rather than any private entity. Thus, provisions in a collective bargaining agreement in the United States that apply only to signatories of an agreement are not labor standards because they are not governmentally imposed.

Second, the standards are mandatory. Employers must comply with them or face legal sanctions. Third, the standards are universal; they apply to all employers within the political scope of the standard (city, region, state, country) unless specifically exempted.

Based on the foregoing definition, an "international labor standard" may be defined as a mandatory procedure, term, or condition of employment, or employer requirement that is established by an international body and that is designed to protect employees from treatment at the workplace that society considers unjust; the failure of a nation to apply that standard to the employers within the nation brings legal sanctions upon the nation and/or the employers in that nation.

The key difference, then, between an international labor standard and domestic labor standard is the international imposition of that standard with the result that any sanction may fall upon the nation and/or the employers in that nation rather than only the employers in that nation. In other words, an international labor standard would bind a sovereign nation and, by extension, the employers in that nation.

195. RICHARD N. BLOCK ET AL., LABOR STANDARDS IN THE UNITED STATES AND CANADA 35 (2003).

III. THE ECONOMICS OF INTERNATIONAL LABOR STANDARDS: A SUMMARY

A. Economic Arguments Against the Imposition of International Labor Standards

Fundamental to neoclassical economics is the principle of cost minimization and consumer welfare. The welfare of consumers is considered maximized when the prices consumers pay for goods and services is minimized. In this model, labor (a worker) is a factor of production that is combined by firms with land and capital in the least costly, most efficient way to produce a product or service that is sold to consumers at the lowest possible price. Worker welfare as labor is not part of the model. The welfare of workers is considered maximized in their role as consumers if the prices they pay as consumers are minimized.[196]

The economic perspective on international labor standards is generally rooted in neoclassical theories of international trade, which, consistent with neoclassical economics, is based on minimizing consumer prices. The foundation of international trade theory is the "factor cost model." This model dictates that countries should specialize in producing those goods and services that they can produce at the least cost. They should specialize in those products in which they have an absolute advantage vis-à-vis other countries and those products in which they have a comparative advantage vis-à-vis other products that can be produced in that country. Thus, Country A may be able to produce Good 1 and Good 2 at less cost than Country B can produce Good 1 and Good 2. But if Country A can produce Good 1 at a lower cost than it can produce Good 2, neoclassical trade theory would dictate it should allocate all of its productive resources to producing Good 1, while Country B should produce Good 2.[197]

Costs are determined by endowments of various productive factors, such as land, capital, climate, and, most relevant to labor standards, labor. If some countries, such as developing countries, have a cost factor advantage in goods produced with low wage, low skilled labor, those are the goods in the production of which that country should specialize. International imposition of labor standards that requires firms in those

196. Richard N. Block et al., *The Economic Dimension of the Employment Relationship*, *in* THE EMPLOYMENT RELATIONSHIP: EXAMINING PSYCHOLOGICAL AND CONTEXTUAL PERSPECTIVES 94, 95-99 (Jaqueline A-M. Coyle-Shapiro et al., eds. 2005).

197. Gary Burtless, *International Trade and the Rise in Earnings Inequality*, 33 J. ECON. LITERATURE 800, 803-05 (1995).

countries to provide compensation in excess of the compensation warranted by the low wage, low skilled labor means that the absolute or comparative advantage of those countries will be arbitrarily reduced. The result will be increased costs of production and increased prices, reducing consumer welfare and firm profits. International labor standards will also decrease employment in the less developed country by discouraging some firms from producing there or by encouraging firms to hire less labor than they would otherwise hire because they are producing at a "suboptimal" labor-capital combination. In other words, while some workers in the less developed country may benefit from the imposition of international labor standards, those benefits are realized at the expense of other workers, who in the absence of the labor standards would be employed at the below-standard market-determined wage, and at the expense of consumers, who will pay higher prices for goods produced in that country than they would otherwise pay.[198]

It is also argued that workers in developing countries are often less productive than workers in developed countries; therefore the absence of labor standards does not necessarily place developing countries at a disadvantage.[199] Thus, this model would require that international labor standards not be imposed, as such standards reduce the employment in developing countries, impair the economic development of those countries, and reduce consumer welfare.

B. Economic Arguments Supporting the Imposition of International Labor Standards

Economic arguments that incorporate a relatively broad conception of labor use traditional economic theory to support the imposition of labor standards. Thus, if one examines the economy from a macro perspective and incorporates domestic considerations into the model, it may be argued that imposing "high" labor standards improves a country's welfare. Labor standards, such as minimum wages, increase the income levels and standard of living of the domestic workforce and increase aggregate demand in the economy. While, in the short run, the imposition of international labor standards may cause firms in developing countries to experience reduced productivity and labor demand, eventually firms will

198. *See* CATRINUS J. JEPMA ET AL., INTRODUCTION TO INTERNATIONAL ECONOMICS 87- 97 (1996); *see also* Eddy Lee, *Globalization and Labour Standards: A Review of Issues*, 136 INT'L LAB. REV. 173 (1997) (focusing more closely on international labor standards as opposed to factors of production in general).

199. *See* Srinivasan, *supra* note 191.

adjust their production process to the higher cost labor standards such that they will operate as efficiently as they operated in the absence of labor standards, but with a new production function. This is consistent with the principle of "efficiency wages" – firms learn to manage to the "higher wage."[200]

Economic models also support the imposition of prohibitions on child labor. If children are not permitted to work, and if a country enacted mandatory school attendance, children will attend school, raising the education level and income level of the country as a whole. Over the long run, the productivity of the workforce will increase, leading to higher incomes and offsetting any cost increases associated with the imposed labor standards. Adding an adult minimum wage and other labor standards will support prohibitions on child labor by assuring that terms and conditions of employment for adults are at a sufficiently high level to permit the population to eschew the income from child labor.[201]

C. Comparing the Arguments

Although the economic arguments against labor standards are more developed than the arguments that support labor standards, as noted, there are valid economic arguments supporting the latter. There are also differences in the assumptions underlying the arguments. Economic arguments against the imposition of labor standards assume a market in which labor productivity is unchanging and in which producers and consumers are the major economic actors. They also assume that all products are produced for export and that the domestic economy is irrelevant. Finally, they assume that all adjustments are instantaneous and cost-free. Firms and workers in the developed countries will quickly shift to products or services in which they have an absolute or comparative advantage

Arguments in favor of labor standards implicitly relax some of these assumptions. Applying a human capital framework and taking into account investment in human capital, they demonstrate that if the assumption of unchanging labor productivity is relaxed, the imposition of labor standards can raise that productivity. Such a framework would suggest the imposition of minimum wage rates, child labor prohibitions, and mandatory schooling.

Relaxing other assumptions further strengthens the case for the

200. For a discussion of efficiency wage theory, *see e.g.*, Alan B. Krueger & Lawrence B. Summers, *Efficiency Wages and the Inter-Industry Wage Structure*, 56 ECONOMETRICA 259 (1988).

201. *E.g.*, Kaushik Basu, *Child Labor: Cause, Consequences, and Cure, with Remarks on International Labor Standards*, 37 J. ECON. LITERATURE 1083 (1999).

imposition of international labor standards. Thus, if one assumes that workers in developed countries have an investment in the present industrial structure and cannot quickly change jobs, and if one assumes that some firms have similar investments, then the absence of international labor standards imposes costs on the workers and (some) firms in developed countries. Social costs may be imposed on communities and firms who must absorb the impact of closed facilities and unemployed workers.

Similarly, the standard model also assumes that labor markets operate efficiently in the absence of labor standards, that both workers and employers are price takers with no market power (neither workers nor employers can influence the price of labor), and that information is full and complete. If the equality assumption does not hold, and employers have market power they use to establish a wage lower than the market wage, labor standards may reduce the market-wage-paid-wage gap.

IV. SELECTED MODELS OF INTERNATIONAL LABOR STANDARDS: THE INTERNATIONAL LABOR ORGANIZATION AND THE EUROPEAN UNION

Despite the general inconsistency between neoclassical economics and labor standards, consideration of social costs as well as a view that the functioning of the market does not always provide workers with socially acceptable terms and conditions of employment have resulted in attempts to establish labor standards at the international level. Two models are worth noting: the ILO model and the European Union model. These will be examined separately.

A. The International Labor Organization

The ILO is a tripartite organization created in 1919 to address low labor standards throughout the world. Initially a component of the League of Nations, it was transferred to the United Nations when the U.N. was created after World War II. The membership consists of countries, with each member country sending labor, management, and union delegates.[202]

The main function of the ILO is to improve living standards and working conditions around the world. This is accomplished primarily through the enactment of conventions, which are really labor standards. As of February 2008, there were 187 active conventions.[203] Member states are

202. Int'l Lab. Org., Origins and History, <http://www.ilo.org/global/About_the_ILO/Origins_and_history/lang--en/index.htm> (last visited Nov. 14, 2008).

203. Int'l Lab. Org., ILOLEX: Database of International Standards, <http://www.ilo.org/ilolex/english/newratframeE.htm> (last visited Nov. 14 2008).

encouraged to ratify conventions. A member state has an obligation to comply with the conventions it ratifies, but, as a general rule, only those conventions it ratifies. Thus, the interest of countries in sovereignty is protected.[204]

Recognizing that not all conventions were equally important, in 1998, the ILO designated eight of its conventions as "fundamental." These are conventions addressing forced labor, child labor, anti-discrimination, and freedom of association/collective bargaining. In declaring these conventions "fundamental," the ILO also declared that all member states were expected to comply with them whether or not the member state chose to ratify the convention.[205]

Two issues have been raised with respect to ILO conventions: universality and enforcement. The question subsumed under universality is whether all countries that ratify a convention must promulgate standards at some established minimum in order to be considered in compliance with its ratification obligation. Ratifying developing countries have argued that, given their level of development, they cannot be expected to provide labor standards at the same level as developing countries.[206]

The second issue with respect to ILO conventions is enforcement. Enforcement is generally either by moral suasion or publicity. A complaint by another country that one country is not complying with its obligations under one or more ratified conventions can ultimately trigger involvement of the International Court of Justice.[207] But there have only been eleven of these established, most recently complaints against Myanmar that it is violating the forced labor convention.[208] Representations by labor or employer organizations can only result in publicity.[209]

204. BLOCK ET AL., *supra* note 195, at 27-29.

205. Int'l Lab. Org., Fundamental Principles and Rights at Work: About the Declaration, <http://www.ilo.org/dyn/declaris/DECLARATIONWEB.ABOUTDECLARATIONHOME?var_language=EN> (last visited Nov. 14, 2008).

206. Block et al., *supra* note 191, at 269-70.

207. Int'l Lab. Org., Complaints, <http://www.ilo.org/global/What_we_do/InternationalLabourStandards/ApplyingandpromotingInternationalLabourStandards/Complaints/lang--en/index.htm> (last visited Nov. 14, 2008) [hereinafter ILO, Complaints]; Int'l Lab. Org., International Labor Standards, ILOLEX: CONST., arts. 29-34, <http://www.ilo.org/ilolex/english/constq.htm> (last visited Nov. 14 2008) [hereinafter ILO CONST.].

208. ILO Complaints, *supra* note 207; *see also* Report of the Commission of Inquiry Appointed under Article 26 of the Constitution of the International Labour Organization to Examine the Observance by Myanmar of the Forced Labour Convention, 1930 (No. 29), Doc. Nos. GB.267/16/2, GB.268/14/8, GB.268/15/1 (1996), *available at* <http://www.ilo.org/ilolex/cgi-lex/pdconv.pl?host=status01&textbase=iloeng&document=10&chapter=15&query=(myanmar)+%40ref&highlight=&querytype=bool&context=0http://www.ilo.org/ilolex/cgi-lex/pdconv.pl?host=status01&textbase=iloeng&document=10&ch>.

209. Int'l Lab. Org., Representations, <http://www.ilo.org/global/What_we_do/InternationalLabourStandards/ApplyingandpromotingInternationalLabourStandards/Representations/lang--en/index.htm>

Ultimately, the ILO represents a model of voluntary assumption of labor standards, through ratification. Enforcement is weak. Generally, however, such measures can be effective with smaller and/or less developed countries that wish to be part of the global community and who may wish to have access to other ILO services.

B. The European Union

Unlike the ILO, which relies on voluntariness, the E.U. has established a system of binding international labor standards. Three E.U. treaties: the Treaty of Rome in 1957, the Treaty of European Union (Maastricht) in 1992, and the Treaty of Amsterdam in 1997 give the E.U. the right to legislate in the social (labor and employment) field.[210]

Originally the E.U., then called the European Economic Community, was primarily concerned with eliminating trade barriers among member countries and to create a "common market" within Europe. The free movement of labor and workers among member countries was a foundation of the common market. Thus, under the Treaty of Rome, any citizen of a member state could move to another member state for the purpose of employment.[211]

Through its legislative process, the E.U. issues directives which are binding on all member states. All member states are obligated to bring their domestic legislation into compliance with an E.U. directive in the field in which the directive is issued. Any citizen in a member state who claims that the domestic legislation is inconsistent with the E.U. directive may bring the case to the European Court of Justice (ECJ). The ECJ rulings are binding on the member state and can require the member state to alter its legislation to comply with the directive.[212]

Between the Treaty of Rome in 1957 and Maastricht, the E.U. moved carefully in the labor standards area. Because directives would be binding, there was resistance within E.U. decision-making bodies to imposing

(last visited Nov. 14, 2008); *see also* HECTOR BARTOLOMEI DE LA CRUZ ET AL., THE INTERNATIONAL LABOR ORGANIZATION: THE INTERNATIONAL STANDARDS SYSTEM AND BASIC HUMAN RIGHTS 93-97 (1996); Block et al., *supra* note 191, at 270.

210. Treaty on European Union, July 29, 1992, 1992 O.J. (C 191) 1, *available at* <http://eur-lex.europa.eu/en/treaties/dat/11992M/htm/11992M.html>; Treaty of Amsterdam Amending the Treaty on European Union, The Treaties Establishing the European Communities and Certain Related Acts, Oct. 2, 1997, 1997 O.J. (C 340) 1, *available at* <http://europa.eu.int/eur-lex/en/treaties/dat/amsterdam.html>; Block et al., *supra* note 191, at 265.

211. Treaty Establishing the European Community, Nov. 10, 1997, 1997 O.J. (C340) 1, *available at* <http://www.hri.org/docs/Rome57/index.html>; BEVERLY SPRINGER, THE EUROPEAN UNION AND ITS CITIZENS: THE SOCIAL AGENDA 52-53 (1994); Block et al., *supra* note 191, at 265.

212. Block et al., *supra* note 191, at 265-68.

European-level regulation on what had long been a domestic matter – employer treatment of citizens/workers. Specifically, the U.K., which subscribed to the neoclassical model of labor markets, was unwilling to submit to European control its labor markets. Countries of continental Europe did not accept the neoclassical assumption to the same extent as the U.K. The unanimity requirement within the E.U. legislative process gave the U.K. effective veto power.[213]

Maastricht solved this problem by permitting the U.K. to opt out of any directives in the social area. Thus, the E.U. began to legislate in the social area. In 1997, with the change in government of the U.K. from conservative to labor, the U.K. withdrew from its opt out.[214]

Examples of directives in the social field include directives on part-time workers and participation. The E.U. countries are required to provide part-time workers with benefits proportional to those provided full-time workers.[215] Undertakings with more than at least fifty employees and establishments with at least twenty employees are required to provide employees information and to consult with employees on the financial and employment situation of the undertaking or establishment.[216]

V. SUMMARY AND CONCLUSIONS

In general, the neoclassical economic model is unsympathetic to the establishment of international labor standards. Labor standards are seen as impairing economic efficiency, defined as maximizing consumer welfare by minimizing prices for goods and services. This impairment results from the fact that countries that are well-endowed with low wage, low skilled labor are prevented from reaping the economic efficiencies associated with that labor.

The neoclassical model has dominated international policymaking on labor standards. Developing countries have generally been unwilling to compromise their comparative or absolute advantage in low-wage, low-skilled labor by permitting the imposition of requirements that are seen as raising the costs of that labor and reducing their advantage. It is also argued

213. LINDA HANTRAIS, SOCIAL POLICY IN THE EUROPEAN UNION 8-10 (1995); BOB HEPPLE, EUROPEAN SOCIAL DIALOGUE - ALIBI OR OPPORTUNITY? 7 (1993); Block et al., *supra* note 191, at 266.

214. Block et al., *supra* note 191, at 266.

215. Council Directive 97/81/EC, 1999, The Framework Agreement on Part-Time Work Concluded by UNICE, CEEP and the ETUC - Annex: Framework Agreement on Part-Time Work, O.J. (L 14/9), *available at* <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997L0081:EN:NOT>.

216. Council Directive 2002/14/EC, 2002, Establishing a General Framework for Informing and Consulting Employees in the European Community, O.J. (L 80/29) 19, *available at* <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002L0014:EN:NOT>.

that such standards protect inefficient firms and workers in high-cost developed countries, enriching their firms and workers at the expense of firms and workers in low-cost countries and at the expense of consumers.

Yet, the establishment of two models of international labor standards demonstrates that non-neoclassical views of labor standards have prevailed from time-to-time. The ILO conventions are close to international labor standards, but countries may choose to adopt or not adopt them as they see fit, and enforcement mechanisms are weak. Fundamentally, however, countries must voluntarily adopt them and forego some sovereignty. In that sense, the ILO standards are not mandatory

It is not surprising that the E.U. has created the only system of true international labor standards, as they have been defined above. The E.U.'s standards are promulgated by a recognized international body and are fully binding on the member countries with sanctions brought upon those countries that fail to comply with the labor standards. The E.U. has implicitly rejected the neoclassical model for a model of the labor market based on principles of imperfect competition and pluralism.[217] Once the neoclassical assumptions are relaxed, the theoretical justification for labor standards becomes increasingly salient.

Overall, it is fair to say that the neoclassical economic model, augmented by principles of national sovereignty, has framed the debate on international labor standards. So long as this continues to be the framework in which international labor standards are discussed, the adoption of broad-based international labor standards is unlikely to occur.

Professor Orly Lobel[*]: First of all, thank you Ken for having a Law and Economics Section program on employment and labor issues. I think that it is clear from all the papers that really we are talking about more than just how we traditionally are trying to define the field, and I think we see this in all the different sections, that you really need these spaces.

This paper offers a very useful overview of the different arguments, or maybe more the modes of argumentation, the structures of thinking about trade and social standards together. I think it offers an important response to some of the conventional models that view trade and social standards as directly in conflict, and Rich offers an alternative economic analysis that considers the ways that the two aspects of trade, both competition and growth on one side and social standards and higher employment standards on the other can be compatible, even though they are not always so.

217. BLOCK ET AL., *supra* note 195, at 94.

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I wanted to raise a few points, or observations. I will focus first on the paper's definition of labor standards in this context because it is a very strict definition. I question why we have to define regulation in these mandatory, traditional ways. That initial point brings us to the more substantive question about how we really think about the benefits of these issues – the distinction between short and long term benefits is the key there. And then the final set of questions I have is about whether the E.U. is really an appropriate analogy for the other contexts mentioned and whether we can think of some alternatives.

The paper focuses on the regulation of labor standards in the context of trade, but we could think of several alternatives to these regulations. Why not regulate consumption as a means to regulate trade? Why don't we delink welfare and work, which I'll talk more about. And what is free trade? We could challenge the concept of free trade, bringing in the idea of open borders and immigration rather than restricting trade by adding labor standards.

With respect to the definition of labor standards, Rich really doesn't give us much to hold on to. He talks about the forum and requirements from employers, but that says very little about the content of labor standards at the international level. That content seems to me really the key challenge when you talk about universal social causes. I see in the literature and in the arguments maybe three or four different models for that. A lot of people would subscribe to labor standards that regulate what we think of as the most abusive forms of labor: forced labor, child labor, and some of the most abusive or most risky types of jobs. But if the ILO's definition of core labor standards adds to that standards about non-discrimination, minimum wages, safety, and unionization, that would partly explain why the ILO has had such little success in bringing even developed countries into itself.

Another level that moves beyond that but still relates to the definition of what these standards are and whether they are mandatory is this whole other literature and movement about fair trade.[218] That literature tries to go even beyond that to think about living wages and subsidies to local owners, so it's very active about raising standards beyond what we think are minimums in developing countries. Whether that is good policy depends on what we are thinking about. We have to first think about it concretely to actually use those arguments about whether free trade without labor standards in the trade agreements is really what promotes growth and

218. For a discussion of wage and labor standards which are broadly accepted by the global fair trade movement *see, e.g.*, Daniel Jaffee et al., *Bringing the "Moral Charge" Home: Fair Trade within the North and within the South*, 69 RURAL SOC. 169, 172-176 (2004).

development or whether something else is really what we want right now. And that issue relates to the question about whether we are really looking at two models of trade: trade plus or just free trade. Additionally, when we are arguing against each other in an economic analysis, we have to ask whether we are thinking about different time frames. There is this gap between short term and long term results. Many would argue that perhaps some of the social regulation that people want to add might raise some standards in the short term but would delay growth and development in the longer term, and I think that we really need more responses to that. There were a few responses in the question of child labor – that is one of the most abusive practices and regulation will be the most accepted – and you can say that the children will go to school so that in the long run there will be more education for the country, but you can't really extend that argument to other sorts of things like minimum wages or other standards.

To follow up, about the definition of mandatory labor standards, it is interesting to have this strict definition in the international level where we know that that has always been a level, international law. We talked a lot about soft law, but there is a lot more happening even at the state level. For example, there is much more thinking about different types of regulations that are more incremental, and agencies are experimenting with models that are non-universal, for example, partial industry regulation, beyond compliance incentives offered by the state but not strictly enforced.[219] The E.U. is actually a great example for this; it is really interested in these new governance tools and has the open method of coordination at the E.U. level. And this really began with the employment law context, where the E.U. is offering these directives, softer guidances and benchmarks for all the countries to raise their labor standards.[220] This soft law is more about peer review and efforts over time rather than immediate mandates that you would want with a more sanctioned regulation.

Which brings me to the question about whether the E.U. is representative of other contexts, especially since your conclusion is that there is this need to give up some concept of sovereignty. We need to remember that the E.U. context is really unique. The member states are getting a lot from joining the E.U. It's not simply that they are giving up

219. For an analysis of partial industry regulation as an alternative to traditional forms of regulation in the consumer protection field, see Ian Ayres & John Braithwaite, *Partial Industry Regulation: A Monopsony Standard for Consumer Protection*, 80 CAL. L. REV. 13 (1992).

220. For an overview of the European Union's open method of coordination approach to employment policy, social inclusion and pensions, see, e.g., Caroline de la Porte, *Is the Open Method of Appropriate for Organising Activities at European Level in Sensitive Policy Areas?*, 8 EUR. L.J. 38 (2002).

some of that sovereignty and saying, "okay well we will have different labor standards." I am not sure how much you can take that to the other places.

In terms of alternatives, I just came back from an Australian conference on fair trade and corporate governance, and it was all about how the consumer movement, consumer regulations or at least consumer activism, is being harnessed to regulate employment in the context of global trade. To me that's quite paradoxical or even oxymoronic that you would think that consumers through the purchase or non-purchase of luxury goods could regulate through the supply side. I find that very problematic to think about consumerism as regulation. I actually offered a reverse option, thinking about regulating consumption in developed countries and in developing countries in some way, asking whether we really need all the different goods that are being produced by all of this very low wage work.

Additionally, when you talk about reasons why we need to have social clauses in trade agreements, you reason that higher labor standards will improve citizen welfare, but this is a time where we are at least thinking about delinking a lot of welfare provisions, social security, and social insurance, true security questions, from the workplace with its increased mobility and lack of security. I think that might indicate that the action is not in imposing labor standards in these trade agreements but maybe asking states and helping them have the capability of raising their universal social insurance programs.

A final thought about what free trade is. I think I would bring into the paper this paradox: we have an idea of free trade that is used to resist any insertion of labor standards and other kinds of standards into agreements, but at the same time, we have very strong ideas about what borders look like in terms of human capital movement. So maybe another way to approach the issue is to just accept that we are opening up borders, at least for trade, but if we are, let's open up borders for people as well. Doing so will go to a lot of what Ruben was commenting about, the problem of undocumented workers having lower standards and being unable to claim their rights. That would also have a spillover effect for the entire labor market