

## **Human Capital, Demography and Labor Mobility in North America** *Regional Labor Market Integration*

**July 7, 2008**

### Resumen ejecutivo

El objetivo de esta propuesta de investigación es proponer opciones de política pública orientadas a la acumulación de capital humano en México como un aspecto central del crecimiento y del desarrollo económico. La investigación buscará explicar cómo las dinámicas demográficas en América del Norte, la integración *de facto* de los mercados de trabajo en esta región y la transición hacia una economía del conocimiento, que ha intensificado la competencia por el talento a nivel global, están cambiando el perfil de trabajador requerido en dichos mercados y por tanto alterarán las oportunidades de empleo futuro de los trabajadores mexicanos en México y en la región norteamericana.

Si bien los tres países norteamericanos enfrentan el reto común de desarrollar una fuerza laboral competitiva, en el caso de México la inversión en el capital humano será crítica para asegurar las oportunidades futuras de generación de empleos de calidad y bien remunerados, que son fundamentales en el desarrollo económico del país. Este es un asunto central al considerar las dinámicas poblacionales de los tres países y en particular el hecho de que en México las cohortes de 15 a 24 años, que están en edad de recibir una educación media superior y superior, empiezan crecer en un ritmo menor y pronto disminuirán.

A partir de un estudio puntual en el sector salud, un equipo transnacional, conformado por investigadores asociados al Centro de Diálogo y Análisis sobre América del Norte, del Tecnológico de Monterrey-Campus Ciudad de México, del Institute for Latino Studies at the University of Notre Dame, del World Policy Institute y del Instituto Tecnológico Autónomo de México, determinará cómo las dinámicas demográficas de Canadá, México y Estados Unidos en las siguientes dos décadas, la interconexión de los mercados de trabajo de estos países y los cambios tecnológicos afectarán las políticas de educación y de desarrollo de una fuerza laboral que respondan tanto a las necesidades de desarrollo económico y de bienestar social en México como a las exigencias de la competitividad en la región de América del Norte.

El proyecto de investigación se realizará en 3 fases:

#### *Primera Fase:*

- En una primera fase, el equipo de investigación realizará una revisión de la literatura relevante, entrevistas y reuniones de investigación en México, Canadá y Estados Unidos y comisionará a expertos documentos sobre aspectos de la temática central del estudio. Estas actividades buscarán comprender los siguientes aspectos:

- Políticas y prácticas educativas y en torno al desarrollo de la fuerza laboral en México
- Las proyecciones demográficas en Canadá, México y Estados Unidos, en particular la población en edad educativa y los nuevos entrantes al mercado de trabajo en las siguientes dos décadas
- La demanda esperada por trabajadores calificados y semi-calificados en Canadá, México y Estados Unidos, particularmente en los sectores de salud e información y tecnología, y
- La interacción de estos factores y las áreas de oportunidad que surgirán para desarrollar una fuerza laboral mexicana competitiva, capaz de atraer inversiones y generar empleos para atender tanto los requerimientos de una sociedad del conocimiento como los servicios demandados por una población que va envejeciendo en los Estados Unidos y Canadá
- Las políticas públicas que podrían contribuir a remover los obstáculos comerciales y no comerciales (credencialización y reconocimiento de competencias laborales) a la movilidad laboral, particularmente en el sector salud
- En la primera fase, que durará 6 meses (Septiembre 2008- Febrero 2009), el equipo de investigación buscará conformar un panel asesor internacional que ayudará a guiar y a organizar la revisión de la literatura, a proveer un balance sustantivo para el proyecto y a ofrecer acceso a contactos y a financiamiento

### *Segunda Fase:*

La segunda fase se concentrará en el *benchmarking* y el foro de diálogo que tendrá lugar en Marzo del 2009, en el Campus Ciudad de México del Tecnológico de Monterrey. Para tal fin, el CEDAN asegurará un financiamiento base que permita la participación de una tercera parte de los expertos así como la organización del evento mismo. El equipo de investigación buscará otros apoyos complementarios para la realización del foro.

El foro se limitará a 30 participantes, quienes desarrollarán una agenda de investigación y de políticas públicas que surgirá de un enfoque integral orientado a explorar beneficios para Canadá, México y los Estados Unidos. Se extenderán invitaciones al foro sobre la base de recomendaciones del comité asesor y de funcionarios públicos de los tres países, de los investigadores identificados durante la revisión de la literatura y de otros líderes de organizaciones no gubernamentales e internacionales.

El foro hará una evaluación de las políticas actuales de investigación y las tendencias que están incidiendo sobre la educación, la movilidad laboral y la absorción de la mano de obra en los mercados de trabajo en México y en América del Norte. Los participantes

harán recomendaciones de investigación en temas relevantes para las políticas públicas en las siguientes áreas:

- Mejoramiento de las oportunidades de educación en México
- Reducción de las limitaciones para el desarrollo de capacidades y competencias laborales en la economía mexicana y la promoción de la migración circular en América del Norte
- Evaluación de los factores que incentivan los actuales patrones de emigración de jóvenes mexicanos y propuesta de vías innovadoras mediante las que los trabajadores mexicanos puedan suplir, no sólo desde los Estados Unidos y Canadá sino también en México, la demanda futura de servicios generada por los mercados de trabajo estadounidense y canadiense
- Evaluación de los factores que afectan la inmigración de trabajadores a México desde Estados Unidos, Canadá e incluso de otras partes del Hemisferio Occidental
- Evaluación de los beneficios que pueden surgir en América del Norte del intercambio de trabajadores calificados

Los resultados de esta segunda fase serán:

- Una lista sucinta de tópicos prioritarios de investigación y de discusión para políticas públicas en los tres países de América del Norte. Esta lista permitirá diseñar un marco analítico de donde se desprendan propuestas específicas de investigación y de diálogo de políticas públicas. Serán también la base de futura colaboración para los miembros del grupo de investigación y de otros participantes
- La publicación de un informe con los temas más relevantes y las conclusiones del foro que será distribuido entre funcionarios públicos, líderes de opinión e investigadores de los tres países
- La publicación de la revisión de la literatura existente
- Una propuesta para establecer un Programa sobre Movilidad Laboral y Capital Humano en América del Norte en la que participarán las instituciones del equipo original de investigación y que será coordinada por el CEDAN
- Una biblioteca electrónica anotada sobre la investigación en torno a las políticas de educación y desarrollo de la fuerza laboral en México, así como de los factores sociales, demográficos y económicos que contribuyen a la movilidad laboral en América del Norte y a las interdependencias entre los tres países. Esta biblioteca electrónica estará apoyada por WOKE (the Workforce Open Knowledge Exchange)

*Tercera Fase:*

La tercera fase es la diseminación del proyecto y la búsqueda de fondos para el Programa sobre Movilidad Laboral y Capital Humano en América del Norte

Los resultados, recomendaciones e informes que resulten del foro serán presentados a líderes de opinión y tomadores de decisión en el sector público y privado, la academia y

otras organizaciones no gubernamentales e internacionales interesadas en las políticas educativas y de desarrollo de la fuerza laboral en América del Norte. Los miembros del equipo de investigación harán estas presentaciones en reuniones especiales o conferencias y en *briefings* personales a líderes de opinión y funcionarios públicos.

El equipo de investigación diseñará y desarrollará un plan de acción y buscará el financiamiento para establecer un Programa de Movilidad Laboral y Capital Humano en América del Norte, que podrá incluir un intercambio electrónico y un *Journal* electrónico que apoyará el intercambio sobre temas derivados de los mercados de trabajo y la movilidad laboral en Canadá, México y Estados Unidos.

## ***Introduction***

Beginning in the last quarter of the 20<sup>th</sup> century, the North American countries have experienced dramatic changes in their respective labor markets. Mexican workers have migrated in growing numbers to work and live in the U.S., and the United States has come to rely increasingly on Mexican-born workers to satiate the demand for workers across a broad spectrum of occupations. Workers across all ages and skills and from all regions of Mexico have joined in these movements, but the greatest proportion has come from the core of Mexico's domestic workforce: young adults, primarily male, with some secondary education. Growing disposable income, economic insecurity and a desire to participate in a growing economy has caused workers in Mexico to search for ways to mitigate their risks and to accumulate capital by migrating internationally.

At the same time, the U.S. has experienced both sustained economic growth and stagnation in the number of U.S.-born young workers. The U.S. has relied increasingly on immigrant workers generally, and from Mexico in particular, to grow the overall workforce. Canada experienced a similar situation, as growth of the overall workforce has become increasingly dependent upon the inflow of immigrant workers. Labor shortages across the Canadian labor market, but particularly in low skill occupations, have resulted from the combined effect of high employment and high participation rates of different workforce groups in Canada, low birth rates, population aging and an immigration system designed to attract high skill workers, the bulk of which have come from outside North America. While in the last three decades the presence of Mexican workers in Canada have been largely limited to a fairly small number (13,000 to 14,000) of temporary workers in the agriculture, the governments of Canada and Mexico are currently engaged in negotiations to expand such labor collaboration in the construction, hospitality and financial sectors. The total population of Mexican permanent migrants into Canada was, according to the 2001, about 46,000.

Historically, Mexican workers who have migrated to the United States have been concentrated in low-skill jobs or in jobs where the skills are acquired through on-the-job training. Some studies show, however, that an increasing proportion of medium-to-high skilled workers from Mexico have immigrated temporarily or permanently to OECD countries, raising concerns about "brain-drain" and the ability of Mexico to retain its best and brightest, who are very much needed to promote economic growth and development. The absolute number of Mexican workers entering the US labor force in the last two decades through the H1B and the NAFTA visa categories for high skill workers is much smaller than that registered by Canadians. According to one study, the proportion of Mexicans with tertiary education, compared with primary education, residing in OECD countries, and particularly the United States, seems to be significant in relation to the Mexican workforce (14 percent of the Mexican population living in developed countries is highly-skilled versus 20 percent of the Mexican population).<sup>1</sup>

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<sup>1</sup> Devesh Kapur and John McHale. The Global Migration of Talent: What Does it Mean for Developing Countries. Center for Global Development Brief, October 2005.

Due to the combined pressures of worldwide population aging and the global nature of the labor market in highly skilled workers, the forecast is for a steep global demand for highly-skilled workers. As China, India and other countries also compete for talent by adopting policies aimed at retaining and repatriating their own high skill workers, Mexican-born workers (both those living in Mexico and in the United States) will necessarily be relied upon to fill high skill jobs. It is not clear that educated and skilled Mexican workers will be prepared to play a major role in filling those jobs, although there will be an opportunity to do so.

Strategies to develop a Mexican-born workforce should be designed to meet the needs of Mexico's economic development and not necessarily those of the US and the Canadian labor markets. Remittances and the possibility of return migration with enriched human capital and return investments in the country of origin are some of the potential benefits of migration. However there are also high costs involved, which include the fiscal losses associated with Mexico's investment in the emigrants' education and human capital and other positive externalities such as the spillover effects of a critical mass of innovative, skilled people that are so central to sustained economic growth.<sup>2</sup>

Thus a key challenge in the coming decades is to design innovative education policies that develop a Mexican-born workforce, which in turn meets the new requirements of a knowledge-based economy, and thus becomes a magnet for investments, job opportunities and economic growth for Mexico and for its North American partners.

In this context, two recent trends may affect public policy and strategy in addressing both the investment priority for education in Mexico and the labor absorption policies for new market entrants in Mexico and in the United States.

- The first is the increasing labor market premium for workers in Mexico with partial or complete secondary education. Education inequality correlates strongly with income inequality. Although education services have been improving in Mexico, a strong implication is that changing technology is changing the skill profile of higher earning jobs (thus the premium for workers with the necessary education level) faster than the improving education distribution is raising education profiles.
- The second is the slowing of demographic increases in the younger cohorts (0-14 years; 15-24 years) affecting both the feasibility of improving the distribution of education and improving quality and the ability of Mexico to absorb increasing percentages of each age cohort in its domestic labor market. The growth rate of the 15-24 years age cohort is slowing and will begin to decline within the next five years both in absolute numbers and as a percentage of total population.

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<sup>2</sup> Nancy Birdsall, Rich Country aging: Poor Country Risks. Remarks, Overview Panel. "Global Demographic Change: Economic Impacts and Policy Challenges." Federal Reserve Bank of Kansas City Symposium, Jackson Hole, August 26-28, 2004.

As Canada and the United States will increasingly rely on Mexican-born workers to meet the labor demand in a broad range of low and high-skilled occupations, they also will be called to maximize the development of such workers and facilitate their integration into their own labor markets. A related issue is the access for Mexican migrant workers to quality education and life-long learning in the United States and Canada.

The challenge to Canada, Mexico and the U.S. is that these countries share a common need for a skilled, well-educated workforce. In the case of Canada and the U.S., the need is fairly immediate and it is becoming critical for their competitiveness; in the context of Mexico, investment in human capital will be also critical for ensuring high-paid jobs and thus better prospects for economic growth and development.

These needs are manifested in a context of growing labor market interdependence. This clearly is the case between Canada and the U.S., especially with respect to workers in high skill occupations. The volume and velocity of labor movements between Mexico and the U.S. suggest that many workers and businesses regard the labor markets of the two countries as *de facto* integrated. Our project starts with the proposition that the labor markets of Canada, the U.S. and Mexico are connected inextricably. We then seek to determine the educational, workforce and economic development policy consequences that flow from this proposition.

Our approach is to ask a diverse group of researchers, public policymakers, business and union leadership, senior educators and demographers, and representatives of foundations and funding agencies from Mexico, the U.S. and Canada to address economic and workforce development in North America. They will be asked to examine the likely scenarios over the next decade or two of expected trends in the demographic size and education profile of young workers as well as of economic and technologic changes affecting productivity and competitiveness in both countries.

This will be accomplished in three phases: *The first phase is exploratory.*

The research team will begin by meeting with key individuals in Mexico to collect existing research, to learn about on-going work and to establish collaboration with individuals and organizations focused on the policy implications of these trends. We will accomplish this through one-on-one interviews, small meetings and special convenings in Mexico. We will follow this with a similar set of interviews and meetings in Canada and in the United States. Our choice of focusing first on Mexico is based on a belief that the relationships between education, workforce training and economic development are less well understood for Mexico than for Canada and the United States. Therefore, as a matter of logistics, the work in Mexico will be a major element driving the project's critical path.

During phase I, the project team, comprised of scholars from the Institute for Latino Studies at the University of Notre Dame, the World Policy Institute, RTI, the Centro de Diálogo y Análisis sobre América del Norte del Tecnológico de Monterrey, Campus Ciudad de México, and the Instituto Tecnológico Autónomo de México, will conduct a

comprehensive review of relevant literature, and, as necessary, commission papers by experts in Mexico, Canada and the U.S., focusing on:

- Education and workforce development policies and practices in Mexico
- The projected demographics of Canada, Mexico and the U.S. – especially of the school-age and new labor market entrants at present and over the next decade
- The expected demand for skilled and semi-skilled labor in Canada, Mexico and the U.S., particularly in the health and information technology (IT) sectors, and
- The interaction of these factors on the propensity of young Mexicans to migrate, either within Mexico or to the United States;
- The areas in which education and workforce development offer investment opportunities in Mexico to address U.S. and Canadian demand for highly-qualified workers, especially in healthcare;
- The potential trade and non-trade (credentialing and recognition of labor competencies) barriers for labor mobility and trade in services in the three North American countries, particularly in the health sector<sup>3</sup>

During the first phase, the full project team also will jointly convene an international advisory panel. The panel will help guide and organize the literature review, provide substantive balance for the project, and provide access to contacts and help secure resources for the project. We expect that the first phase will require six to nine months to be completed.

Phase II is concentrated on the *benchmarking and discovery forum* to be convened in March 2009, at the Mexico City Campus of the Tecnológico de Monterrey, under the auspices of CEDAN.

We propose that attendance be limited to about thirty core participants. Participants will develop an agenda for further policymaking and research in Canada, Mexico and the United States focusing on the mutual interests of the three countries and their peoples that may be served by a comprehensive approach.

Invitations to the forum will be extended on the basis of recommendations from the advisory committee, from researchers identified in the course of the literature review, from senior government or former government officials in Canada, the U.S. and Mexico, from the leadership of business, labor and education in the three countries, and from non-governmental and international leaders.

The forum will take stock of current research on the policies and trends affecting education, labor market absorption and migration in Mexico and in North America. The

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<sup>3</sup> The drive for greater labor mobility should not, under any circumstances, serve as an excuse to undermine the rights of workers. The intrinsic rights of human beings are universal and irrevocable. Greater labor mobility should be used to strengthen the power of workers and not lessen their individual rights nor generate a false incentive for the workers to waive those rights. One outcome is to make workers less vulnerable to those employers who use current restrictions to violate labor laws.

participants will develop recommendations for priority research topics relevant to public policy options for:

- Improving education opportunities in Mexico
- Reducing skilled labor constraints in the Mexican economy and in promoting circular migration in North America
- Addressing the incentive factors fueling current patterns of out-migration of young Mexican workers and proposing innovative ways through which Mexican workers can service the Canadian and US labor market demands also those of Mexico
- Addressing factors affecting in-migration of workers to Mexico from the United States, Canada and from other parts of the hemisphere
- Exploring the benefits that may be achieved in North America from an exchange of skilled and well-educated workers.

By the end of phase II, the project will result in a series of products:

- A succinct listing of priority topics for further research and public policy discussion in Canada, Mexico and the United States. N.B. the intent is to create a framework for further work on these topics, not to generate a laundry list of tangentially relevant topics of interest to participants or to develop any of the topics in terms of specific research designs or proposals. It is, however, expected that some of the topics will generate interest among participants in further collaboration. Some of the participating funders will find the listing of priority topics useful for framing their own plans for support of research and public policy initiatives
- Publication of the proceedings and conclusions of the forum as a report to senior Canadian, Mexican and U.S. government officials, policymakers, and policy researchers. The outcomes of the forum also will inform both the research design for and development of further projects by the project team and others
- A published review of current research
- A research proposal aimed at establishing a North American Program on Labor Mobility and Human Capital which will be co-hosted by the Institute for Latino Studies at the University of Notre Dame and directed by CEDAN-Tecnológico de Monterrey
- An annotated electronic library on research related to education reform and policies in Mexico, the social, demographic and economic factors contributing to North American migration, and on labor market inter-dependencies between the three countries. This electronic library will be supported by WOKE (the workforce open knowledge exchange).

The third phase is the *dissemination* step of the project and *fund-raising* efforts for continuing research.

- The findings, recommendations and reports resulting from the benchmark and discovery forum will be presented to policymakers and opinion-leaders from

in economic and workforce development policy and education policy from government, business, labor, academia and other non-governmental organizations in Canada, Mexico and the United States. These presentations will be done at special convenings in Canada, Mexico and the U.S. conducted by the research team, at appropriate conferences, and in personal briefings to senior policymakers and opinion leaders

- The project team will look for funding opportunities for the Program on North American Labor Mobility and Human Capital
- The project team will design, develop the business plan and assess the feasibility of an ongoing, moderated electronic exchange, including an electronic journal, to support further research and discussion on labor market concerns shared by Canada, Mexico and the United States. Implementation of the electronic exchange is separate from this project.

### ***Context and Regional Issues To Be Addressed***

Since the 1848 Treaty of Guadalupe-Hidalgo marking the end of the U.S.-Mexican War and establishing the political boundary between the United States and Mexico, Mexican workers have entered the U.S. and participated in the American labor market. Although the rates of immigration and labor market participation of Mexicans have ebbed and flowed with economic and political conditions and changes in U.S. immigration policy, the number of Mexicans emigrating to the U.S. reached unprecedented levels at the beginning of this decade: in 2000, Mexican migration peaked at an estimated 530,000 new arrivals. Overall, Mexicans grew from approximately 8 percent of all the foreign-born living in the United States in 1970 to 32 percent in 2004. According to the Pew Hispanic Center, approximately 11.2 million Mexicans were in the United States as of March 2004, with approximately 5.2 million having legal immigration status. It estimates that the undocumented Mexican population would have surpassed 6.5 million by the end of 2005.<sup>4</sup> An analysis in May 2007 by Pew points out that the flow in migration from Mexico since mid-2006 may be slackening. This analysis is based on changes in four indicators and not on direct measurements. These indicators include a slowing in the rate of increase of the combined authorized and unauthorized Mexican foreign-born population in the United States, a slowing in the pace of growth of employment of foreign-born Latinos (Mexican born workers account for about 60 percent of the foreign-born Latino workforce), declining growth in remittances to Mexico since mid-2006, and a decline in the number of apprehensions (adjusted seasonally) by the Border Patrol along the U.S. – Mexico border since the second quarter of 2006.<sup>5</sup>

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<sup>4</sup> The drive for greater labor mobility should not, under any circumstances, serve as an excuse to undermine the rights of workers. The intrinsic rights of human beings are universal and irrevocable. Greater labor mobility should be used to strengthen the power of workers and not lessen their individual rights nor generate a false incentive for the workers to waive those rights. One outcome is to make workers less vulnerable to those employers who use current restrictions to violate labor laws.

Jeffrey S. Passel. Estimates of the Size and Characteristics of the Undocumented Population. Pew Hispanic Center, March 2005, p. 3.

<sup>5</sup> Indicators of Recent Migration Flows from Mexico: Fact Sheet. Pew Hispanic Center, May 30, 2007.

An analysis published in 2005 by the Pew Hispanic Center argues that the pattern of immigration flows coincides closely with U.S. economic performance and that the correlation “is particularly strong” with the flow from Mexico.<sup>6</sup> Of the variables examined by Passel and Suro, changes in the rate of U.S. employment between 1992 and 2004 correlated most strongly at 0.90, and other U.S. economic variables have correlations of 0.40 to 0.50. Correlations for Mexican macroeconomic indicators varied from about -0.23 to 0.30.<sup>7</sup> They argue that these patterns suggest that during this period “the ‘pull’ factors have been somewhat more powerful than the ‘push’ factors for determining short-term migration levels.”<sup>8</sup> In addition, they observe that “with much of its economy linked to the U.S. market under the North American Free Trade Agreement, Mexico’s business cycle now very clearly mirrors trends in the U.S. economy.”<sup>9</sup>

### *Immigration Issues and the U.S. Workforce*

The U.S. Bureau of Labor Statistics estimates that the civilian labor force in the U.S. is projected to reach 164.2 million in 2016, an increase of nearly 12.8 million, or 8.5 percent, less than the 17.5 million workers, or 13.1 percent, added during the 1996-2006 decade. This represents an annual growth rate of 0.8 percent – a rate that is 0.4 percentage points lower than the annual growth rate of the previous decade.<sup>10</sup> During the 2006-2016 period, the growth of the labor force will be due to population growth since the participation rate is expected to decrease slightly from the 2006 level.<sup>11</sup> In a separate analysis of BLS and other projections, Lindsay Lowell, et al., conclude that the share of immigrant workers in the total labor force is projected to increase from 13 percent in 2000 to 18 percent by 2030, with as much as 60 percent of the subsequent growth in the U.S. labor force between 2030 and 2050 being driven by the children of immigrants.<sup>12</sup> They also estimate that “new immigration is likely to contribute between one-third and one-half of the growth of labor force through 2030 and begin to decline afterward.”<sup>13</sup> Between 2010 and 2030, immigrants and their U.S. born children “are projected to account for all growth in the U.S. labor force.”<sup>14</sup>

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<sup>6</sup> Jeffrey S. Passel and Roberto Suro. *Rise, Peak and Decline: Trends in U.S. Immigration 1992-2004*. Pew Hispanic Center, September 2005, p. 10.

<sup>7</sup> Variables include change in labor force, change in employment, change in GDP.

<sup>8</sup> *Ibid.* p. 11.

<sup>9</sup> *Ibid.*

<sup>10</sup> Employment Projections: 2006 – 2016. U.S. Bureau of Labor Statistics. December 4, 2007.

<sup>11</sup> Mitra Toossi. *Labor Force Projections to 2016: More Workers in their Golden Years*, **Monthly Labor Review**. Bureau of Labor Statistics, November 2007, p. 33.

<sup>12</sup> B. Lindsey Lowell, Julia Gelatt and Jeanne Batalova. *Immigrants and Labor Force Trends: The Future, Past, and Present*, **MPI Insight**. Migration Policy Institute, July 2006, p. 3 (citing Jeffrey S. Passel, “Projections of Population, Educational Attainment, and Labor Force Participation: By Generation, Age, Sex, and Race/Ethnicity,” unpublished tabulations prepared for the Pew Hispanic Center, October 2003).

<sup>13</sup> *Ibid.*, p. 4 (citing separate BLS projections on the number of all workers and Passel’s projections on the immigrant percent of the labor force, above).

<sup>14</sup> *Ibid.*

Total employment is expected to grow by 15.6 million jobs during the period 2006-2016, from 150.6 million to 166.2 million.<sup>15</sup> Among the occupations forecast to experience the largest growth numerically, ten out of fifteen require a minimum of only short or moderate-term on-the-job training. According to 2000 Census data, immigrants were over-represented in five of these occupations (e.g., cooks, janitors and building cleaners, personal and home care aides). At the high-skill end of the occupational spectrum, four large-growth occupations require a Bachelor's degree or higher.<sup>16</sup> Immigrants have made up a large share of some of the fastest-growing occupations requiring college degrees, and were overrepresented as a share of the workforce in seven fast-growth occupations: six requiring a college degree (medical scientists, database administrators, computer software engineers, network systems and data communications analysts, physical therapists, and post-secondary teachers) and one, dental assistants, not requiring a college degree.<sup>17</sup>

The U.S. economic demand for new workers may be met by various means in addition to immigration: increased labor participation rates of women, older workers and youth, increased productivity achieved through greater capital investment and new technologies, and redistribution of work through off-shoring. Immigrants will nevertheless play a critical and expanding role in making US businesses operations more competitive and in fostering the growth of the U.S. economy. And, in light of the fact that many of the occupations with the largest or fastest growth require advanced skills, the educational and skill composition of the immigrant workforce must be diverse.

Growing global competition for these high skilled workers further adds to their value and costs to employers. Whereas U.S. businesses could once assume that they would be able to recruit high-skilled or well-educated immigrants to fill critical occupations, either from the ranks of U.S. colleges and universities or directly from overseas, the circumstances are changing. The economies of China, Korea and India are booming and are retaining and attracting back many of their nationals. The same is true for parts of Europe, e.g., Ireland, from which the U.S. previously drew skilled and educated workers. This is coupled with a slowed enrollment foreign college students in U.S. colleges in the aftermath of 9/11, an increased aggressiveness in recruiting by higher education institutions in Australia, New Zealand, Canada and other countries, and improving higher

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<sup>15</sup> Employment Projections: 2006 – 2016. U.S. Bureau of Labor Statistics. December 4, 2007. Note: It is not correct to conclude that the difference in employment projections and labor force projections represents a labor shortage. The employment projections include self-employed workers, unpaid family workers, and workers employed in more than one job.

<sup>16</sup> Lowell, et al., pp. 6-7. The fifteen largest growth occupations are elementary and middle school teachers; customer service representatives; general and operations managers; medical assistance and health care support; driver, sales workers and truck drivers; food preparation and serving workers; registered nurses; waiters and waitresses; postsecondary teachers; nursing, psychiatric and home health aides; personal and home care aides; janitors and building cleaners; cooks; computer software engineers. Those requiring bachelor's degrees or higher are postsecondary teachers, computer software engineers, elementary and middle school teachers, and general and operations managers.

<sup>17</sup> Ibid. The other fast growth occupations include: network and computer systems administrators, physicians assistance, medical assistants and healthcare support, physical therapist assistants and aides, occupational therapists, dental hygienists, and occupational therapist assistants and aides.

education opportunities for students living in emerging or maturing economies, such as India and China.

### *Immigration and the Canadian Workforce*

Immigration is also a central issue for the future economic growth of Canada, its population and its labor force. According to Human Resources Canada, the Canadian workforce is expected to increase from 17.3 million people in 2005 to 19.1 million by 2015. The annual rate of growth of the labor force would average 1.3% over the period 2006-2010 and 0.7% over the period 2011-2015. This compares with 1.7% on average between 1996 and 2005, and peak growth rates of 2.9% in 2002 and 2.3% in 2003. The slowing of labor force growth over the next ten years will be a consequence of the expected slowdown of population growth, combined with a declining rate of labor force participation as ageing baby boomers begin to retire. The majority of job openings (about 3.8 million existing positions) over the 2006-2015 period will stem from the need to replace retired workers. That number compares with the 1.7 million new non-student jobs that will be created as a result of increasing economic activity. In other words, about 70% of all job openings during that period will be associated with the need to replace retired workers, up from an average of about 51% over the last ten years. Retirements will account for an even higher share of total job openings over the longer term.<sup>18</sup>

Like in the United States, in Canada immigrants are a significant source of labor supply, representing about one fifth of new job seekers and their participation in the labor force is expected to grow. Each year Canada receives about a quarter of a million people who become permanent immigrants—half of which are economic and business immigrants—and about 90,000 temporary foreign workers, a majority of which now have relatively low skill levels. Since the retirement of baby boomers is forecasted to start earlier (2011) in Canada than in the United States, Canada's labor force will diminish sooner and more immigrants will be increasingly needed to take new job openings and addressing labor market pressures in several critical sectors, including health care and managerial occupations (Sylvain 2006).<sup>19</sup> In fact, the constant inflow of new immigration (net of emigration) will account for almost all net labor force growth in Canada within the next 10 years, and all net population growth.

Over the 2006-2015 period, more than two thirds of all new jobs in Canada are expected to be in occupations usually requiring postsecondary education (university and college) or in management. In contrast with the United States, where immigrant workers are

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<sup>18</sup> Human Resources Canada. *Looking Ahead: A 10-Year Outlook for the Canadian Market (2006-2015)*, Labour Market and Skills Forecasting and Analysis Unit, Strategic Policy Research Directorate, Ottawa, October 2006.

<sup>19</sup> Occupations where future labor demand is forecasted to outpace future labor supply include legislators and senior management (in health, education, social and community services and public administration), human resources managers, as well as supervisors in trades, facility operation, oil and gas drilling and service, and processing. Increased health care needs resulting from the aging of the population will result in shortage pressures in occupations such as physicians, optometrists, health diagnosing and treating professionals, head nurses and supervisors, nurse aides and orderlies (HRSDC..).

concentrated at the extremes of the education ladder, immigrants in Canada tend to have skill levels which enable them to contribute quickly to labor market development and thus tend to be as educated as the Canadian-born population.<sup>20</sup> In fact Canada's points system was designed to attract immigrants that are very likely to succeed in the Canadian labor market. Skill has been the key component considered in Canada's immigration policies since the 1990s. The new cohorts of immigrants have higher education than those accepted earlier and the occupations declared by immigrants at entry have also shifted towards jobs with greater skill requirements. According to official data, in 2005 only, over 80 per cent of all immigrants (192,000) between the age of 24 and 65, had post-secondary (tertiary) schooling, such as college, a trade education or advanced degrees.

Foreign students are also an important source of skilled workers for Canada. According to HRSDC, foreign students represented about one-fourth of all temporary residents coming to the country over the period 1996–2005.<sup>21</sup> Stocks were around 78,000 in the late 1990s, rose to almost 121,000 in 2001 and reached 154,000 in 2005. About half of those foreign students were enrolled in universities. Foreign students are viewed as high-potential immigrants since many of the integration issues faced by other immigrants are solved by the Canadian education process. In fact, starting in 2005, Canada introduced a number of measures to facilitate the immigration of foreign students and to allow them to gain some Canadian off-campus work experience.

Interestingly, Canada is not only a destination country for high skill workers, but it is also a source country for skill workers migrating to the United States. It is estimated that about 20,000 Canadians a year migrate permanently to the neighboring country to the South. And many of those are aged 25-64 and are university trained.<sup>22</sup> Many more Canadian skill workers enter the United States through temporary work programs. Starting in the mid-1990s, about 70,000 Canadians enter the US through NAFTA's Chapter 16, which permits Canadian and Mexican professionals in 60+ occupations to

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<sup>20</sup> According to Martin, about 40 percent of the foreign-born US residents have less than 12 years of education, and many are having a hard time closing the gap between their US incomes and the incomes of similar Americans. See Philip Martin, "Regional Patterns of International Migration: North American Present and Future,"

[http://www.jil.go.jp/foreign/event\\_r/event/documents/2004sopemi/2004sopemi\\_e\\_session1.pdf](http://www.jil.go.jp/foreign/event_r/event/documents/2004sopemi/2004sopemi_e_session1.pdf)

<sup>21</sup> In 2005, Citizenship and Immigration Canada (CIC) introduced new policies that did not alter the initial assessment of study permit applications, but reduced the number of transactions that foreign students must undertake with CIC after they have arrived in Canada. In 2005, CIC also introduced two initiatives to allow more foreign students to gain Canadian work experience and to use their studies in a job environment. Students studying outside Montreal, Toronto and Vancouver are eligible to work for an additional year (for a total of up to two years) under the Post-Graduation Work Program, after graduating from a participating Canadian institution. However, in April 2006, CIC launched the Off-Campus Work Permit Program nationally to allow full-time foreign students to work part-time (up to 20 hours a week) during their academic session and full-time during their scheduled breaks (e.g., summer holidays). Foreign Students, 1996-2005. The Monitor, Ottawa, Citizenship and Immigration Canada, Third Quarter 2006.

<sup>22</sup> Surendra Gera, Samuel A. Laryea, Thitima Songsakul, "International Mobility of Skilled Labour: Analytical and Empirical Issues, and Research Priorities", *Skills Research Initiative. Working Paper Series*, Human Resources Development Canada, Industry Canada and Social Sciences and Humanities Research Council, Working Paper 2004 D-01.

accept US job offers and stay in the US indefinitely. Another 20,000 or so high-skilled Canadian workers enter the US each year to work temporarily through the H1B visa category.<sup>23</sup> The relatively high number of these Canadian workers who migrate to the United States has been an issue of concern for Canadian policy makers and it is particularly today when Canadian policies are actively seeking to tap such valuable human resources for their own economy.

### *Mexico: Migration, Education and the Workforce*

From the Mexican side, the challenges are profound. Since joining WTO in 1993 and signing NAFTA in 1992, the Mexican economy has evolved from one that was state dominated and protectionist to one of the most open in Latin America.<sup>24</sup> During this time, the export profile changed from one with dominance on primary products to one with the larger dependence on manufacturing goods, with manufacturing increasing from 17 percent of the GDP in the early 1990s to 30 percent in 2004.<sup>25</sup> This was driven in large part by the expansion of maquiladoras: an expansion that has largely halted recently as a result of a slowdown in the U.S. economy and increased competition from countries with lower labor costs.<sup>26</sup>

Jobs in these manufacturing and assembly industries were mainly semi-skilled. Mexico has been unable to replace lost manufacturing jobs with investments requiring more highly skilled jobs. A significant factor is the shortage of skilled workers, including workers who have finished secondary education and are available for specialized skills training.

The manufacturing sector has not generated rapid sustained growth in the economy as a whole: only 1 percent of the inputs required by export plants are currently produced in Mexico. The mid-size and small business sectors have languished as a result of inadequate domestic demand. This phenomenon is linked to severely depressed wages for workers during the last two decades. One result from the inability of the formal economy to produce enough jobs is a vast informal labor sector of approximately 10.5 million people in 2002. Once people employed by enterprises or households, working without a contract or receiving no payment, are included, the size of the informal sector is estimated to be as high as 18.5 million, or almost half of total national employment. The growth of the informal sector is fueled by migration from rural to urban areas, an absence of income support for those who cannot find jobs in the formal sector, suppressed incomes in the formal sector and the low opportunity costs for self-employment.<sup>27</sup> Unlike most OECD countries, unemployment rates in Mexico do not vary with levels of educational attainment. This is due in large measure to the sizeable informal sector, leading to a low official employment rate.<sup>28</sup>

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<sup>23</sup> Martin,

<sup>24</sup> *Thematic Review on Adult Learning: Mexico Country Note*. Organization for Economic Cooperation and Economic Development, August 2004, p. 4.

<sup>25</sup> Ibid.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid., p 9

<sup>28</sup> Ibid., p. 10

Although Mexico has been increasing its investment in education and is undertaking a variety of reforms to improve quality, educational opportunity remains poorly distributed with many obstacles for continuation beyond primary education for poor and rural students. The slow progress in education has placed Mexico in the unfortunate situation among manufacturing countries of having relatively high production costs and a workforce with relatively low-level skills.<sup>29</sup>

Mexico has one of the most unequal education distributions in Latin America. Systemic inequalities are linked closely to disparities in income distribution: 52 percent of the population aged 15 and older, or 33 million people, lack a nine-year basic education. The urban-rural disparities are dramatic: nearly 65 percent of the rural population is educationally disadvantaged (lacks a nine-year basic education), while nearly 23 percent living in urban areas are similarly categorized. In absolute terms, two thirds of the potential demand for basic education is comprised of people living in urban areas.<sup>30</sup> The OECD benchmark for industrialized countries as an indication of the availability of skilled workers is a completed upper-secondary education. It is in this context that the low proportion of upper-secondary education attainment in Mexico (22 percent for ages 24-65 in 2001) is especially disturbing.<sup>31</sup>

According to a recent OECD working paper, “one important factor behind low productivity is the low level of human capital. Human capital in Mexico, as measured by average years of schooling amongst the working-age population, is the lowest in the OECD and there has been only limited progress over recent decades ... while primary education has become nearly universal. Mexican enrollment rates are still lagging at lower and upper secondary levels. About twenty percent of the population aged 12-15 has already left school and a quarter of those still in school have repeated at least one class.”<sup>32</sup>

### *Role of Adult Education*

Adult education and training serves two functions: one as a “second chance” for workers that did not receive sufficient education and training in their youth, and as a means for upgrading the skills and education of workers as job requirements change. In Mexico, the adult education system does not serve either function well for educationally disadvantaged groups: Only 0.5 percent of the 25-64 years old who lack a primary education and 2.5 percent of those with a primary education received some form of job-related training in 2001. During this same period, 3.7 percent of those without a primary education and 2.5 percent of those with a primary education were enrolled in basic

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<sup>29</sup> Ibid., referencing *Economist*, July 24, 2003.

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

<sup>32</sup> Stephanie Guichard. *The Education/Challenge in Mexico: Delivering Good Quality Education for All*. OECD Economic Department Working Paper No. 447, September 2003.

education. In contrast, 30.7 percent with a university education received some form of job related training.<sup>33</sup>

### *Mexicans in the U.S. Workforce*

Much of the U.S. perception of Mexican immigrants is colored by comparison to education levels of other immigrants and of native-born Americans. Sixty three percent of Mexican immigrants age 25 or greater have less than a high school education, and 32 percent have a high school education. Only 4 percent have a college education or above. This is below education attainment levels of immigrants from other Latin American countries: they are 31 percent with less than high school education, 54 percent with a high school education and 16 percent with better than a high school education. Among adults born in the U.S., 13 percent have less than a high school education, 62 percent finished high school and 25 percent have better than a high school education.<sup>34</sup>

Somewhat contrary to the perceptions of education inadequacies in Mexico, immigrants in the United States are more educated than residents of Mexico. Individuals with 10 to 15 years of schooling comprise the Mexican cohort most overrepresented in the United States.<sup>35</sup> While other studies, following Borjas, argue that immigrants from Mexico are negatively selected in terms of observable skill, Chiquiar and Hanson show that “Mexican immigrants in the U.S. are drawn disproportionately from the middle and upper middle of Mexico’s wage distribution. Those most likely to migrate abroad would earn medium to high wages in Mexico, and those least likely to migrate would earn low or very high wages in Mexico. In terms of observable skills, men exhibit intermediate selection and women exhibit positive selection.”<sup>36</sup> After correcting for unauthorized Mexican immigrants, Chiquiar and Hanson argue that the distribution remains largely intact.

Chiquiar and Hanson observe that it is surprising that relatively high-wage individuals emigrate from Mexico to the U.S., especially in light of the estimated returns to education in Mexico relative to the U.S. They suggest several factors may contribute to this phenomenon: Some of the plausible reasons that more educated workers may be better able to negotiate the migration process, may have better access to migration networks, and may be less subject to credit constraints in financing migration. In addition, low-skill workers may be more risk averse and that enforcement against illegal entry may act as a head tax, thereby penalizing the less skilled.<sup>37</sup>

Inasmuch as most of the attention on immigration to the U.S. from Mexico focuses on lower skilled workers, migration of high skilled workers and professionals is often overlooked. The track record here poses other concerns. Generally, internationally

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<sup>33</sup> Ibid.

<sup>34</sup> Lowell, et al. p. 16.

<sup>35</sup> Daniel Chiquiar and Gordon H. Hanson. *International Migration, Self-Selection, and the Distribution of Wages: Evidence from Mexico and the United States*, **Journal of Political Economy**, 2006, vol. 115, no. 2, p. 241.

<sup>36</sup> Ibid., p. 268.

<sup>37</sup> Ibid., p. 276.

educated immigrants in the United States do not do as well as their native-born, U.S. educated counterparts. In an unpublished paper, Jeanne Batalova and Michael Fix at the Migration Policy Institute and Rob Paral, Rob Paral and Associates note:

*... [A]cross all world-region groups, foreign-educated immigrants tend to be in lower-skilled jobs than natives, a pattern found at every level of education. Foreign-educated immigrants from Europe/Northern America/Oceania are closest to natives in terms of the skills they use on the job. At the other extreme, foreign-trained Latin American immigrants are markedly more likely than natives and their fellow immigrant cohorts to be in unskilled jobs, regardless of their education level.*

*... Nationwide, 44 percent of recently arrived foreign-educated Latin American, and 33 percent of recently arrived African were working in unskilled jobs. Thirty-five percent of Latin Americans who had been in the United States for ten or more years were still working in unskilled jobs.<sup>38</sup>*

Currently available data make it impossible to assess the labor market performance in the United States of internationally educated immigrants from Mexico. But, it is not unreasonable to conclude that they do not fair as well as comparably educated immigrants from other regions of the world. This raises profound questions as to whether employers and state regulatory agencies in the United States are prepared to properly accommodate a more robust influx of well-educated immigrants from Mexico.

The Canadian experience regarding integration of immigrants in the labor market shows that maximizing the human capital potential of foreign nationals for the domestic labor market can be in effect very complex. Studies have long demonstrated that, in terms of income, educated immigrants do not fair as well as comparable educated Canadian-born workers. This gap between skilled immigration and the Canadian labor market stems partly from the fact that “skilled immigrants often do not succeed in getting those professional and other highly-skilled jobs for which they are presumed to be qualified. As a result, pervasive under-utilization of the skills of highly-educated immigrants –brain waste- is a serious issue in Canadian immigration.”<sup>39</sup> This “brain waste” often combines with other barriers to the integration of immigrants into the labor market. These barriers include, among others, cultural issues, lack of language skills (some times relating to the lack of sector-specific terminology) and insufficient Canadian work experience, making it difficult for foreign nationals to perform well in the labor market of their new country of residence and obtain full-time, permanent employment. The consensus in the literature seems to have arrived at the conclusion that this situation can be explained by a combination of factors: (1) a change in the source country composition and associated factors including English and French language skills and discrimination, (2) a fall in the

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<sup>38</sup> Jeanne Batalova, Michael Fix and Rob Paral, *Immigrant Skill Underutilization in the U.S. Labor Market*, Migration Policy Institute, October 2007 (unpublished), pp. 7 – 8.

<sup>39</sup> Jeffrey G. Reitz, “Closing the Gaps Between Skilled Immigration and Canadian Labor Markets: Emerging Policy Issues and Priorities”, March 2007 (unpublished paper).

return to pre-Canadian labour market experience, and (3) a general fall in new entrant earnings.”<sup>40</sup>

With immigrants being increasingly relied upon to nurture the Canadian labor force, policy makers have started to re-evaluate their system of foreign credentials recognition and propose better avenues to maximize the development of immigrants and to effectively integrate them into the Canadian labor market. Several important initiatives in this regards were adopted since 2006 and include a larger budget for the Immigrant Settlement and Adaptation Program and the establishment of the Language Instruction for Newcomers to Canada, the Host Program (a volunteer-based program to help immigrants to integrate in the community and to find job contacts), the Foreign Credentials Referral Office (2007)<sup>41</sup> and the Enhanced Language Training Initiative,<sup>42</sup> aimed not only at improving the immigrant language but also their workplace skills.

### *Mexican Migration and Social Capital*

In examining the effect of social capital on international migration from Latin America, Massey and Aysa argue that having a parent, sibling, wife or child with prior experience in the United States dramatically increases the odds that a household head who has never before migrated will leave on a first trip to the U.S.<sup>43</sup> Previous research by Massey and Espinosa based on data gathered in twenty-five Mexican communities suggests that Mexico-U.S. migration stems from three mutually reinforcing processes: social capital formation (people who are related to U.S. migrants are more likely to migrate), human capital formation (direct experience in migrating) and market consolidation. The last is especially interesting in the context of the interconnections between U.S. and Mexican labor markets. Under the market consolidation hypothesis, the increased connection between the two markets and to global economies causes competitive market penetration into subsistence sectors, displacement of manual work in rural Mexico and wrenching economic transformations and worker dislocations in urban markets. This growing economic insecurity and a strong desire to participate in the new political economy causes workers to search for ways to mitigate their risks and to accumulate capital by migrating internationally.<sup>44, 45</sup>

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<sup>40</sup> Arthur Sweetman, “Canada”, in Jan Niessen and Yongmi Schibel (eds.), *Immigration as Labour Market Strategy. European and North American Perspectives*, Geneva, Migration Policy Group, June 2005.

<sup>41</sup> The recognition of foreign credentials process is particularly challenging in Canada: for regulated occupations, about 400 regulatory bodies, 55 provincial departments and ministries, 5 provincial assessment services and numerous post-secondary educational institutions participate in the assessment and recognition of foreign credentials.

<sup>42</sup> *Annual Report to Parliament. 2007*. Ottawa, Citizenship and Immigration Canada, 2008.

<sup>43</sup> Douglas S. Massey and Maria Aysa. *Social Capital and International Migration from Latin America*. Expert group meeting on international migration and Development in Latin America and the Caribbean, Department of Economic and Social Affairs, United Nations Secretariat, December 2005. p. 10.

<sup>44</sup> Douglas S. Massey and Kristin E. Espinosa. *What’s Driving Mexico-U.S. Migration? A Theoretical, Empirical, and Policy Analysis*. **American Journal of Sociology**. Volume 102, Number 4 (January 1997), pp. 989-990.

<sup>45</sup> Contrary to Chiquiar and Hanson, Massey and Aysa argue that Mexican immigrants are selected from the lower end of the distribution of education and skill. It should be noted, however, that their analysis, unlike that done by Chiquiar and Hanson, did not take into account what Mexican emigrants and residents would

Two recent trends may affect public policy and strategy in addressing both the investment priority for education in Mexico and the labor absorption policies for new market entrants in Mexico, in Canada and in the United States. The first is the increasing labor market premium for workers in Mexico with partial or complete secondary education. Education inequality correlates strongly with income inequality. Although education services have been improving in Mexico, a strong implication is that changing technology is changing the skill profile of higher earning jobs (thus the premium for workers with the necessary education level) faster than the improving education distribution is raising education profiles.<sup>46</sup>

The second is the slowing of demographic increases in the younger cohorts (0-14 years; 15-24 years) affecting both the feasibility of improving the distribution of education and improving quality and the ability of Mexico to absorb increasing percentages of each age cohort in its domestic labor market. The growth rate of the 15-24 years age cohort is slowing and will begin to decline within the next five years both in absolute numbers and as a percentage of total population.<sup>47</sup>

Much of the attention in the current debate in the United States and in Mexico with respect to immigration policy is focused on unauthorized workers. At the same time, the demographic composition of both the Canadian and the U.S. labor force is prompting concern among policy makers that changes in domestic value-added work in both service and manufacturing sectors will be necessitated by the net loss of skilled workers as fewer new workers are available to replace retiring ones. While some production may be retained through improvements in productivity or through product substitutions, some will go elsewhere if new sources of workers are not found, resulting in a shift of economic activity from the United States and Canada to offshore locations. Current overall skills and educational levels in Mexico suggest that it does not have sufficient numbers of competent workers to either capture these offshore investments for itself or see its workers move into U.S. or Canadian jobs.

These trends, combined with increased global competition for skilled workers, require that U.S. and Canadian businesses will have to look to new sources of competent workers. If history is a guide, U.S. policy will likely support such efforts. Canada is

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each earn under a common price for skill. On the other hand, Massey and Aysa note that land ownership is positively correlated with out-migration. This suggests that migrants may be moving to self-finance agricultural production and possibly using land as collateral for loans to undertake the trip. Home and business ownership, however, have strong negative effects. Once someone has migrated to the U.S. and has returned to their community of origin, the probability is high that they will leave again and the probability increases with each trip that is taken. Alfredo Cuecuecha in *The Educational Characteristics of the Immigrants from Mexico to the United States*, Institute Tecnológico Autónomo de México, Centro de Investigación y Estudios de Posgrado, January 2005, argues that there is an inverse U relation between migration and education.

<sup>46</sup> An excellent review of the relationships of income disparity to education level in Mexico is *Evolution of Earnings and Rates of Return to Education in Mexico*, Gladys Lopez-Acevedo, **World Bank Policy Research Working Paper**, 2691, October 2001.

<sup>47</sup> See World Population Prospects: 2004 Revision Population Database at <http://esa.un.org/unpp/index.asp?panel=2>

already following this path. New global attention to the effects of migration on the economic and social prospects of sending countries will also force Canada and the United States to be sensitive to the needs of developing economies to retain the best and the brightest for their own future and to find innovative ways to ensure “brain circularity” and avoid “brain waste.” In the context of the combined Canada - U.S. - Mexico labor market, the three North American countries have strong interests in developing a large pool of skilled workers, many of whom may work in Canada, Mexico and the United States over the course of their lifetimes. In many meaningful ways, such an approach would mirror the labor market relationship that exists already between the United States and Canada.

### *Future Policy Variables*

The variables for future policy include: a) an understanding of the educational systems and workforce characteristics in each country, b) a comprehensive view of the labor requirements and needs of the three countries, c) the priorities in Mexico for investment in education, particularly in better distribution of quality opportunities at the secondary level, d) technical cooperation and coordination to improve the comparability of learning outcomes and certifications at the secondary level and beyond, and e) a framework formalizing Canada, U.S. and Mexico economic and labor interdependence for the benefit of the citizens of the three countries.

Five positive trends may be supported:

- 1) It may improve economic growth rates through improving productivity in existing industry (reducing the supply constraint of skilled labor and labor with the threshold level of education needed for skills training) and attracting or growing new industries requiring high skilled workers
- 2) It may improve wages and earnings in Canada, the United States and Mexico by regularizing the flow of workers and by equalizing labor market conditions overall through economic gains
- 3) It may improve income distribution and reduce social inequality. One factor is whether Mexico can move higher numbers with better geographic distribution above the threshold level of education (note: the threshold level needs to be calculated and studied). Another factor is whether the U.S. is able to improve the skills, education levels, and work opportunities of its domestic low-income workforce
- 4) It may help to staunch the flow in terms of absolute numbers of Mexican nationals with an economic incentive to emigrate, if only as a constant percentage of a declining cohort. This will allow Mexico to retain a greater number of its most able workers

- 5) It may lead to the development of policies that regard the exchange of workers throughout North America as part of a broad set of policies supporting high value adding activities all three countries. Such exchanges could include opportunities for U.S. and Canadian nationals to study and train in Mexico, mutual recognition of educational and professional credentials, as well as related technical cooperation on education policy, training and skills standards.

### ***Project Strategies***

In preparing this proposal, the research team has reviewed available literature and data sets and has consulted with individuals knowledgeable about the linkages between education levels and economic opportunity in Mexico and the propensity to migrate either within Mexico or externally to the United States or other places where the perceived opportunities outweigh the costs and risks of migration. The inquiries confirm that there is substantial interest in the questions raised in the concept paper and the possibilities for developing public policies addressing education opportunities in Mexico in ways that:

- Supports economic growth in Mexico
- Substantially improves the overall skills-level of the Mexican labor force to meet international competitive pressures
- Significantly changes the profile of those seeking to migrate over the next decade and beyond
- Regard the labor exchange between Mexico, Canada and the U.S. as a partnership that does not threaten the workers in any country.

Our view is that the needs and policy perspectives of the three North American countries and their peoples must be treated equally. This is demonstrated through a free and open exchange of research, opinions and ideas within a framework tied to further collaboration and to actionable steps on both sides of the international border. A forum that is removed from domestic and border politics offers such an opportunity.

More specifically, the inquiries have led to the following judgments:

The available literature and informed opinion confirm the judgment that young Mexicans with some primary but less than secondary education are among the most frustrated in the Mexican economic context and are among the most likely to out-migrate. The intermediating factors are not well understood or studied, but appear to include the lack of meaningful economic opportunities for those with some education but less than secondary, the fact that at least some years of secondary education are required for most skills training options, and the technology changes in Mexican industry increasingly require some secondary plus specialized skills training

The systems of professional training and skills development in Mexico are more complex and extensive than previously understood. For an overview, see *School-to-Work*

*Transition in Mexico* by Bernardo Mendez Lugo, Deputy Consul for Mexico in Tucson, Arizona, prepared for CERI-OECD. Weaknesses include: poor geographic distribution with most concentrated in urban areas; poor articulation with growth sectors; high entrance requirements that restrict opportunities for those with low levels of formal schooling

Our research partnership provides clear evidence that there are several Canadian, U.S. and Mexican institutions and organizations with relevant research capacities and interests in topics related to the initial project concept. It is essential that our team meet with key researchers, opinion leaders and policymakers in the three countries to explore appropriate collaborations and partnerships. We believe that this must occur prior to beginning comprehensive research or finalizing the research approach. Failure to do so is likely to reduce the reception and policy value of the research.

Similarly, there are many U.S. institutions and organizations conducting research and policy analysis on issues related to Mexican migration and the issues around the integration of Mexican migrants into the U.S. economy. These institutions often focus on the consequences of migration and not, however, on the causes. While there are only few Canadian institutions looking specifically at Mexican migration, there is a growing number of institutions interested in looking at mobility in the North American context. There are likewise many institutions in Mexico addressing the challenges of migration, improving education and moving the Mexican economy to high skill – high growth industries, but not necessarily as joined issues. It is not uncommon to focus on domestic concerns and to not link the consequences of education and economic conditions to migration behaviors and the loss of the country's human resources. It is important to pull these issues into a broader discussion to ensure that new research initiatives engage relevant opinion-leaders of both countries in the discussion of both causal and behavioral factors related to the development of Mexico's workforce and economy and to migration between Mexico, Canada and the U.S.

### *Work Plan and Products*

The table must be prepared and set carefully before new research can begin that leads to a comprehensive view of the shared Canadian, Mexican and U.S. labor market. This requires that researchers, policymakers and opinion-leaders develop a common understanding of what is known and what needs to be known about the relationships between education, workforce development, economic development and the movement of labor between Mexico and the U.S.

This requires three steps:

- Assemble all relevant research, summarize the major findings and put it in a usable form. This is an example of the classic meaning of benchmarking – establish a common starting point

- Assemble a group of researchers, policymakers, opinion-leaders, practitioners and activists to assess the current state of knowledge and to set forth an agenda for further research and policy development
- Assemble the resources (represented by the appropriate decision-makers) that may support future work guided by the agenda.

The proposed **three-day benchmarking and discovery forum** is the central event for the project as a whole. It will be designed to foster discussion and exchange. All formal presentations will be brief and limited as “stage-setters.”

The participants at the meeting will be organized into diverse teams. The forum will be conducted in English and Spanish and will be supported by simultaneous translation. Researchers, policymakers, business and union leadership, senior education administrators, and senior foundation program managers from Mexico and the U.S. will be invited to attend to discuss:

- Labor policy – particularly the factors affecting the demand for skilled and semi-skilled labor in Mexico, Canada and the United States over the next decade and beyond
- Demography – particularly the likely trends over the next decade any beyond for the size and distribution of the school-age cohort (6-14) and the cohorts entering the job market (15-24) in Mexico; and, the likely trends in Canada, the U.S. and Mexico in labor market participation by age, skill, gender, race and ethnicity, and nativity
- Education policy options – particularly the factors in Mexico affecting early dropout, access to secondary education, the likelihood of completing secondary education or having access to specialized skills training; and, for Canada, Mexico and the United States, mutual recognition of educational and professional credentials
- Likely trends in technology and skill requirements – particularly the factors affecting demand for new workers with the education levels appropriate for industry-specific training and skills development
- Migration behaviors – particularly the factors affecting expected wage premia in Mexico, the perceived costs and risks of migration for Mexico, Canada and the United States (including the challenges in Mexico of immigration from other parts of Latin America), and the consequences of policies in the receiving states of Mexico, Canada and the United States for absorbing new workers at different levels of education and skills preparation
- Investment opportunities that generate employment in Mexico to service the U.S. and Canadian labor demand, particularly in the health sector.

The literature review, the topics that will be addressed in commissioned papers, and the specific topics that will be addressed at the forum will be accomplished in consultation with an advisory committee comprised of leading authorities from Canada, the U.S., Mexico and international organizations engaged in research and policy development on education, workforce development and economic development. Invitations to the forum

will be extended on the basis of recommendations from the advisory committee, from researchers identified in the course of the literature review, from senior government or former government officials in the U.S., Canada and Mexico, from the leadership of business, labor and education in the two countries, and from non-governmental and international leaders. Participants at the forum will include some members of the advisory committee.

The project also is designed to propose a research Program on Labor Mobility and Human Capital in North America that addresses human capital needs to promote competitiveness in the North American region.

As part of this program, the project would also seek to foster continued learning and exchanges. A primary tool will be the workforce open knowledge exchange (WOKE). WOKE will specifically support an annotated electronic library (the workforce open knowledge exchange) that may be distributed on the websites of organizations and government institutions participating in the benchmarking and discovery forum. The content will include:

- Research related to education reform and policies in Mexico
- Social, demographic and economic factors contributing to international migration between Mexico, the United States and Canada
- Credentialing of professionals and employment of internationally educated workers
- Information on labor market inter-dependencies between the U.S., Canada and Mexico.

WOKE was developed as an electronic resource facilitating the exchange of knowledge and experience within the workforce development community. Its advanced content management and search capabilities bring together all fields of practice and policy within workforce development. The underlying contextual mapping supports explorations of complex issues.<sup>48</sup> WOKE was funded by the Employment and Training Administration of the U.S. Department of Labor.

We also will actively disseminate the findings of the benchmarking and discovery forum and promote further discussion and research through a series of briefings, special convenings, conference presentations, and press interviews. The issues that will be raised during the first two phases do not lend themselves to easy answers and quick policymaking. Any effort to achieve substantive and constructive changes will require the active engagement of policymakers and opinion-leaders in economic and workforce development policy, in education policy and in migration policy and will come from among government, business, labor, academia, the media and non-governmental organizations in Mexico, Canada and the United States. It will also require that we go outside of Washington, DC, Ottawa, and Mexico City to business and commercial centers in both countries so that we engage directly the attention of those groups who will have to live with the consequences of whatever comes from this initiative.

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<sup>48</sup> A demonstration of WOKE may be viewed at <http://www.workforceoke.org>.

Finally, we believe that the stage should be set for continued discussion and analysis through an ongoing electronic exchange, including an electronic journal. The project team will design and test the feasibility of such an exchange and will develop the business plan. Funding for implementation is separate.

The combined first two phases of the project will be completed in six to nine months. The benchmark and discovery forum will be convened in March of 2009 and will take place in the Mexico City Campus of the Tecnológico de Monterrey. The duration of the dissemination phase and fund-raising efforts for a more permanent program, or third phase, is projected to occur over twelve months.

The advisory committee will be organized and will meet by telephone conference call in the second month of the project. At that time, the advisory committee will be asked to review a proposed subject-matter outline of the literature review and a preliminary description of the research that will be included in the review. Work on the literature review will commence in earnest following the initial advisory committee meeting. The advisory committee will re-convene for the second time to discuss the preliminary agenda for the forum, to make its recommendations as to the participants in the forum, and to review the progress of the literature review. The advisory committee will meet for the final time to review the outcomes of the forum and to offer its recommendations regarding further steps or outstanding issues.

**Table 1: Core activities**

Phase 1	Project launch
September 2008- February 2009	Advisory committee review of proposed subject matter outline of literature review; preliminary description of the research to be included in the review; forum site selection; agenda for upcoming consultations in Mexico, Canada and the United States
	Exploratory meetings in Mexico, Canada and the United States to consult with senior officials, education and workforce policy researchers
	Progress review of literature review by advisory committee; identify possible forum participants; preliminary forum agenda
	Follow-up consultations in Mexico, Canada and the United States
	Publication and distribution of forum support materials, including literature review
Phase 2	Invitation to forum participants
March 2009	Benchmarking and discovery forum
	Final advisory committee meeting: review of forum outcomes & proposal for establishing a Program on North American Labor Mobility and Labor Markets
September 2009	Publication of forum outcomes and proceedings; literature

	review; final report
	Implementation of WOKE <sup>49</sup>
Phase 3	Dissemination & Fund-raising for WOKE and PNALM

The project budget is divided along the three phases and must account for the following:

*First phase*

The senior project researchers and at least two graduate assistants

- Travel, meeting and convening expenses. During the first six-months of the project, members of the core research team

*Second phase*

Forum expenses including meeting facilities and facilitation, meals, and lodging; we believe that an essential element of the forum is that all participants share meals and receive the same lodging at a common location. Air travel for those requiring assistance and services such as simultaneous translation may be included as part of the conference expenses depending on available budget

- CEDAN will ensure funding for travel expenses of a third of the participants, meeting facilities and other related expenses
- Funding from other sources will be sought to commission papers, contribute to the forum expenses and cover for publication and distribution of the forum proceedings

*Third phase*

- Modifications to WOKE to upgrade bi-lingual functionalities and other customizations
- Publication and distribution of the forum proceedings, project findings and presentation materials
- Preparation of the proposal for the Program on North American Labor Mobility and Human Capital
- Preparation of the business plan for the ongoing exchange.

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<sup>49</sup> Customizations to WOKE and other modifications needed to accomplish a functioning bi-lingual electronic library will be operational within four months of the beginning of phase 2. The taxonomic framework of WOKE will be modified as necessary to reflect the organization of the forum, the literature review, and the subject matter. In addition, it will incorporate the emerging technology of Web 2.0 that supports collaborative tagging of content. These modifications will be incorporated into the core operational framework of WOKE so that all content relationships may be mapped.