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**International and Foreign-Born Students in
Higher Education in the Washington, D.C.
Metropolitan Area**

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Executive Summary

This research focus on two groups of students: international students and foreign-born students. An international student is an individual who is in higher education in the U.S. on a non-immigrant visa, and a foreign-born student is an individual who is enrolled in higher education and was born outside of the U.S. territories to non-U.S. parents.

- With 18,224 international students enrolled in its 22 institutions in 2010-11, the Washington DC Metropolitan Area ranked 6th among metropolitan areas in terms of its international student population.
- The Washington DC Metropolitan Area has been experiencing relatively slow growth in international students, compared to the top ten metropolitan areas in terms of international student's enrollment.
- The associate's colleges in the Washington DC Metropolitan Area are ranked higher nationally than the doctorate-granting universities in terms of number of international students hosted.
- The economic contribution of international students on the Washington DC Metropolitan Area's economy is estimated to be 0.57 billion dollars in 2010-11.
- There were 104,253, foreign-born students in higher education of Washington DC Metropolitan Area in 2010, accounting for more than one-fifth of the region's total enrollment.
- About 44 percent of the foreign-born students are naturalized citizens, 39 percent are legal permanent residents, and 18 percent are non-immigrants (international students).
- About 64 percent of all foreign-born students hold jobs while attending school. The median annual income is \$20,000 for undergraduate foreign-born students who work and \$46,000 for working graduate students.

A Note about the Data

This report uses data from the Open Doors 2011 Report on International Educational Exchange prepared by Chow and Bhandari from Institute of International Education (IIE), the American Community Survey (ACS) and the Department of Homeland Security (DHS). Open Doors include a comprehensive information resource on the international students in the United States. IIE is the leading non-profit educational and cultural exchange organization in the U.S. and conducts a survey of about 3000 accredited U.S. institutions each year. ACS is a survey based on a sample of the U.S. population, therefore the figures are estimates rather than actual values. Therefore, differences among groups should be read with caution since sampling and non-sampling errors account for a portion of these differences.

Introduction

Human capital is vital for regional success. As the President of Northern Virginia Community College, Dr. Templin stated, the universities and colleges in the U.S. are the “21st century ‘Ellis Island’”. Local colleges and universities are at the very frontier of international recruitment, as they serve as anchors to attract ambitious youth, educating them into skilled workers; they are also magnets for foreign-born youth all over the U.S. to relocate across the country. These students go on to contribute to the regional labor market, relocate to other regions across the United States, or return to their home countries.

Two groups of students will be the focus of this research. The first group is the narrowly-defined “international students,” who are non-immigrant students in higher education in this region on temporary visas (such as an F-visa for degree-seeking students and J-visa for exchange students and scholars). The second group includes all foreign-born students in higher education who were born outside of the U.S. territories and to non-U.S. parents. The foreign-born student group is a bigger group that includes the narrowly-defined “international students.”

International Students in Higher Education in the Washington DC Metropolitan Area

An international student is defined as “an individual who is enrolled for courses at an accredited higher education institution in the U.S. on a temporary visa, and who is not an immigrant (permanent resident with an I-151 or Green Card), a citizen, an illegal alien (undocumented immigrant) or a refugee.”¹ Most international students (89.2 %) are under the F visa program, and a smaller share are under the J visa program (5.6 %). F- and J-visas are temporary, non-immigrant visa types, which prohibit the holder from engaging in work outside campus and expire upon graduation. The number of F-visas issued nationally to foreign students has grown from 234,322 in 2002 to 447,410 in 2011, reflecting a 90 percent growth.² Notice that the DHS’ visa issuance data is not an equivalent to the count of the international student enrolled in U.S. institutions, because an international student may be required to apply for a visa each time he or she returns to the home country.

International student enrollment at accredited colleges and universities in the U.S. reached 723,277 in the year 2010-11, accounting for 4.7 percent of total enrollment. From 2005-06 to 2010-11, the numbers of international students enrolled in U.S. colleges and universities has grown 28 percent (from 564,766 to 723,277). The number of new international students enrolled each year has grown 50 percent (from 142,923 to 214,490).³ The ten metropolitan areas hosting the most international students are home to 36 percent of all international students in the United States. With 18,224 total international students enrolled, the Washington DC Metropolitan Area is ranked sixth among all

¹ Chow, P. and Bhandari, R. (2011). *Open Doors 2011 Report on International Educational Exchange*. New York: Institute of International Education. Page 114

² Immigration Yearbook 2012, DHS. <http://www.dhs.gov/yearbook-immigration-statistics>

³ Chow and Bhandari, 2011

metropolitan areas in terms of the size its of international student population (Table 1). However, among these top ten metropolitan areas, the Washington DC Metropolitan Area experienced the lowest growth rate since 2005-06 (3.7 %) and it is the only metropolitan area that experienced a negative growth rate since 2009-10 (- 6.7 %).

Table 1
Top 10 Metropolitan Areas Hosting International Students, 2010-11

Rank 2010-11	Metropolitan Area	International Students Enrollment 2010-11	% Change since 2009-10	% Change since 2005-06	Total Institutions
1	New York, NY	61,884	1.8	22.4	95
2	Los Angeles, CA	43,045	2.2	24.0	64
3	Boston, MA	32,969	12.6	41.3	51
4	Chicago, IL	21,555	9.4	37.4	64
5	San Francisco, CA	18,444	4.6	49.3	37
6	Washington, DC	18,224	-6.7	3.7	22
7	Houston, TX	17,982	3.4	54.6	20
8	Dallas, TX	17,472	8.8	42.5	23
9	Philadelphia, PA	13,441	9.5	7.0	42
10	Seattle, WA	13,147	8.0	61.7	25
	Top 10 Total	258,163	4.5	29.9	--

Source: Chow and Bhandari, 2011

Noticeably, relative to other metropolitan areas that are on the top-ten list, the Washington DC Metropolitan Area has the second fewest number of institutions (22). Among the institutions hosting 1,000 or more international students, University of Maryland – College Park and George Washington University are ranked 35th and 45th respectively. Other regional institutions with significant international student populations are listed in Table 2.

The two largest associate’s colleges of the region - Montgomery College and Northern Virginia Community College are ranked 5th and 6th respectively among all associate’s colleges hosting international students in 2010-11. However, none of the regional doctorate-granting universities appears in the top 30 institutions hosting international students.⁴

Nationally, China has sent the largest share of international students since 2009-10. Table 3 shows the top ten places of origin for international students in the U.S. and in the Washington DC Metropolitan Area. In 2010-11, 22 percent of the international students in the U.S. were from China, compared to 16 percent in the Washington DC Metropolitan Area. Overall, international students in the Washington DC Metropolitan Area are less concentrated in terms of place of origin. For example, international students in this region are less likely to be from the top three places (38 % regionally versus 46 % nationally), and more likely to be from Saudi Arabia, Brazil and Nigeria, compared to the rest of the country.

⁴ Chow and Bhandari, 2011

Table 2
Regional Institutions with Number of International Students, 2010-11

Rank	Institution	City/Place	State	International Students	% Regional Total
35	University of Maryland – College Park	College Park	MD	3,514	19
45	George Washington University	Washington	DC	2,837	16
76	George Mason University	Fairfax	VA	2,172	12
92	Georgetown University	Washington	DC	1,929	11
95	Montgomery College	Rockville	MD	1,895	10
103	Northern Virginia Community College	Annandale	VA	1,788	10
144	American University	Washington	DC	1,273	7
--	Catholic University of America	Washington	DC	434	2
--	University of the District of Columbia	Washington	DC	657	4
	Total of Top 9 Institutions			16,499	91
--	Others ⁵			1,725	9
	Total			18224	100

Source: Chow and Bhandari, 2011; rearranged by author

Table 3
Top 10 Countries of Origin for International Students in the U.S. and Washington DC Metropolitan Area, 2010-11

Rank	Countries of Origin (for U.S.)	Percent	Countries of Origin (for Washington MA)	Percent
1	China	21.8	China	16.2
2	India	14.4	India	13.5
3	South Korea	10.1	South Korea	8.5
4	Canada	3.8	Saudi Arabia	3.6
5	Taiwan	3.4	Canada	2.7
6	Saudi Arabia	3.1	Taiwan	2.2
7	Japan	2.9	Brazil	2.0
8	Vietnam	2.1	Turkey	2.0
9	Mexico	1.9	Nigeria	1.8
10	Turkey	1.7	Japan	1.7
	Top Ten	65.2		54.2
	U.S. Total	723,277	MA Total	18,244

Source: Source: Chow and Bhandari, 2011; rearranged by author

⁵ In the Open Doors Report, the authors provide only the metropolitan area's total and the number of international students by major institutions. The author collects and summarizes student numbers of all regional institutions appeared in the Open Doors Report and the "others" are calculated as the difference between the sum and the metropolitan total. Unfortunately the "others" cannot be associated with specific institutions.

Besides the non-monetary contribution of teaching and research conducting, international students benefit the U.S. economy at both national and regional levels through tuition contribution and living expenses in the regional market. The economic contribution of international students was calculated by U.S. Department of Commerce to be 21.3 billion dollars in 2010-11.⁶ A separate estimate of 20.2 billion dollars was produced by National Association of Foreign Student Advisers (NAFSA) for 2010-11.⁷ NAFSA has broken down the total by state and shows the international contribution for the District of Columbia is 0.28 billion dollars.⁸ Using the international student's share in the metropolitan area in states of Maryland and Virginia, the economic contributions of international students for the Washington DC Metropolitan Area parts of Maryland and Virginia are estimated to be 1.74 billion dollars and 1.13 billion dollars respectively.⁹ Therefore, the total economic contribution on the Washington Metropolitan Area's economy is estimated to be 0.57 billion dollars in 2010-11 (Table 4).

Table 4
Economic Contribution of International Students, 2010-11

Economic Impact	Students	Total \$ Contribution
DC	7,951	\$ 282,198,347
Suburban MD	5,861*	\$ 173,591,374*
Suburban VA	4,412*	\$ 113,478,025*
MA	18,224	\$ 569,267,747*

Source: NAFSA: Association of International Educators. State Level Economic Impact Analysis prepared by Jason Baumgartner of Indiana University – Bloomington.

*Estimates using international student numbers provided by Chow and Bhandari, calculated by author.

Foreign-Born Students in Higher Education In the Washington DC Metropolitan Area

In this part of the report, the focus is on all foreign-born students in higher education in this region. In 2010, there were 2,778,255 students in U.S. higher education who are foreign-born, accounting for 12 percent of the total enrollment.¹⁰ The size and composition of the foreign-born student population in higher education are directly related to the regional foreign-born population; the fields of study, labor market performance and trends reflect the region's competitiveness and can help predicting the

⁶ Bureau of Economic Analysis, U.S. Department of Commerce, <http://bea.gov/international/>

⁷ NAFSA: Association of International Educators, 2012. <http://www.nafsa.org/eis>

⁸ Financial contribution to U.S. states analysis prepared by Jason Baumgartner of Indiana University – Bloomington, using NAFSA's data source. <http://www.nafsa.org/eis>

⁹ The international students' numbers provided by Chow and Bhandari is by institution. Not all institutions in Washingtonian MD and VA are included and therefore the contributions are likely to be underestimated.

¹⁰ ACS 2010 1-y estimates. Students in higher education are defined as being enrolled in school with grade level attending being "college undergraduate (freshman to senior)" or "graduate or professional school beyond a bachelor's degree".

regional economic development. Compared to international students who are in the country on a temporary non-immigrant-purposed visa, foreign-born students are mostly likely, as well as easier, to enter the labor market after graduate, if they are not yet in the labor market.

In 2010, there were 104,253 foreign-born students in higher education in the Washington DC Metropolitan Area, accounting for 22 percent of total students enrolled. While the region hosts 2.5 percent of nation’s international students, it hosts 3.8 percent of the nation’s foreign-born students. In addition to the 18,224 international students (17.5 %), these foreign-born students include naturalized citizens (43.9 %) and legal permanent residents (38.6 %) (Table 5). The students who are naturalized citizens and legal permanent residents may have been in the U.S. before they enrolled in higher education and can be U.S. immigrants’ foreign-born children, refugees, or U.S. citizens and permanent residents’ foreign-born spouses.

Table 5
Immigration Status of Foreign-born Students in Higher Education,
Washington DC Metropolitan Area, 2010

	Number	Percent
Native-born Students	381,559	78.5
Foreign-born Students	104,253	21.5
Naturalized Citizens	45,739	43.9
Legal Permanent Residents	40,290**	38.6**
Non-immigrant Aliens (International Students)	18,224*	17.5*
Total	485,812	100.0

Source: Based on ACS 2010 1-year Estimates;

* for 2010-11, Source: Chow and Bhandari, 2011

** Calculated based on both data sources: ACS includes non-citizen students number, and non-citizens in higher education should have two categories – legal permanent resident and non-immigration aliens (international students). Legal permanent residents are estimated to be the difference between the non-citizen student size provided by ACS and international student size provided by Source: Chow and Bhandari, 2011

The foreign-born students are older compared to the native counterparts at the same level of study in the Washington DC Metropolitan Area. The median age is 26 years for undergraduate foreign-born students (compared to 21 years for their native-born counterparts), and 34 for foreign-born graduate students (compared to 29 for their native-born counterparts). The foreign-born students in higher education in this area have been stayed in the U.S. for a median length of 6 years.

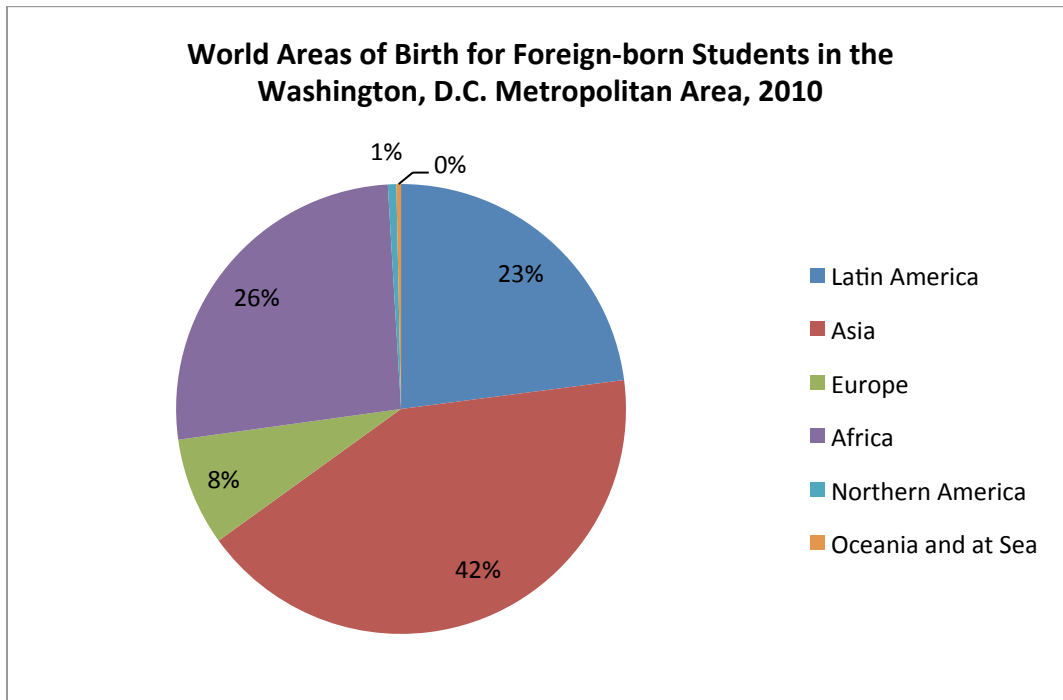
District of Columbia colleges and universities host nine percent of the region’s foreign-born students, Maryland hosts 48 percent and Virginia hosts 43 percent. A slightly larger share of foreign-born students are attending school at the graduate level: the graduate/undergraduate ratio of foreign-born students is 30:70; this ratio is 28:72 for native-born students. Roughly the same share of foreign-born students attend public institutions as the native-born students.

Table 6
Top 10 Places of Origin for Foreign-born Students
in Washington DC Metropolitan Area, 2010

Rank	Country of Birth	Number	Percent
1	South Korea	6,414	6.15
2	India	5,916	5.67
3	Ethiopia	4,638	4.45
4	China	4,512	4.33
5	Nigeria	4,351	4.17
6	Philippines	4,331	4.15
7	Peru	4,038	3.87
8	El Salvador	3,745	3.59
9	Cameroon	3,444	3.3
10	Ghana	3,293	3.16
Total		44,682	42.84

Source: ACS 2010 1-year Estimates.

Figure 1.
World Areas of Birth for Foreign-born Students
in the Washington DC Metropolitan Area, 2010



Source: ACS 2010 1-year Estimates

Table 6 and Figure 1 show the distribution of origin countries and world areas of birth for foreign-born students in the Washington DC Metropolitan Area. The compositions are very different than the one for international students. Compared to international students, foreign-born students come from much less concentrated places. For example, China, which is home for 16.2 percent of the international students in Washington DC Metropolitan Area, is the origin for only 4.3 percent of the foreign-born students in this region. Although only two Latin American countries (Peru, 3.9 % and El Salvador, 3.6 %) are listed in the top ten sending countries for international students, Latin America are areas of birth for 23 percent of the foreign-born students in this region (Figure 1). These differences are because the process of becoming an international student (including preparation and application) is usually much shorter than the process of becoming a legal permanent resident or a naturalized citizen student. Therefore the international student origins' composition gives a quick reflection on the current international development and popularity of the U.S. or regional institutions throughout the world, while the foreign-born student origins' combination reflects a long-term involvement of the sending places of the U.S. immigration.

Table 7
Fields of Study for Foreign- and Native-Born Students*,
Washington DC Metropolitan Area, 2010

Field of Study	Undergraduate (%)			Graduate (%)		
	Foreign-Born	Native-Born	National Average	Foreign-Born	Native-Born	National Average
Agriculture	1.2	2.5	2.4	3.1	2.2	1.8
Business & Management	23.2	20.7	20.5	15.2	13.7	14.2
Education	4.9	6.1	9.1	6.0	9.0	13.6
Engineering	6.4	4.4	5.6	13.4	6.6	7.6
Fine Arts	4.1	2.4	5.7	1.6	3.5	3.4
Health Professions	8.5	4.9	7.7	6.5	4.3	7.3
Humanities	13.4	14.6	14.5	11.2	18.1	13.7
Math & Computer Science	5.1	6.7	3.8	9.0	5.2	4.2
Physical & Life Science	15.3	9.3	12.1	13.3	11.1	15.4
Social Science	17.9	28.4	18.6	20.7	26.4	18.9
total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Based on ACS 2010 1-year Estimates, author's calculation.

* For students who claimed their fields.

Table 7 shows that compare to the national average, the Washington DC Metropolitan Area is a popular place to study Math & Computer Science and Social Science. Smaller shares of students study Education, Health Professions or Fine Arts in this region. Compared to native-born students, foreign-born students at both the under- and graduate levels are more likely to study Engineering and Physical & Life Science.

Table 8
Employment Status and Median Annual Wage of Foreign- and Native-born Students
in Higher Education, Washington DC Metropolitan Area, 2010

Employment Status	Foreign-born	Percent	Native	Percent
Civilian employed	66,965	64.3	226,801	59.5
Unemployed	8,938	8.6	30,050	7.9
Armed forces	652	0.6	9,065	2.4
Not in Labor Force	27,698	26.6	115,572	30.3
Total	104,253	100.0	381,488	100.0
Median Annual Wage				
Undergrad	\$20,000	-	\$14,500	-
Graduate	\$46,000	-	\$50,000	-

Source: ACS 2010 1-year Estimates

Besides the economic contribution through tuition and local expenses, foreign-born students impact the economy through their direct contribution to the labor market. Unlike the international students who can only work on-campus, students who are naturalized citizens and legal permanent residents can work both on- and off- campus. Table 8 shows that a larger share (64 %) of all foreign-born students than native-born (59 %) currently hold jobs. The median annual wage is \$20,000 for undergraduate foreign-born students who are working and \$46,000 for working graduate students (both working civilian jobs).

Summary of Findings

The purpose of this research was to profile two types of students – the non-immigrant international students, and all foreign-born students in the Washington DC Metropolitan Area and to document the size, to measure the trends and to evaluate the economic contributions.

First, in 2010-11, there were 18,224 non-immigrant international students in the Washington DC Metropolitan Area higher education, accounting for 3.8 percent of all students enrolled in the region’s higher education. These international students are estimated to bring to the region 0.57 billion dollars through tuition and other school-related expenses. However, it is a point of concern that the region has experienced relatively slow growth of the international student population compared to other major metro areas. The regional institutions are in the frontier of the international recruitment process and they provide a sustainable high-skilled, American-educated labor pool for the regional and national economy. Therefore, international students’ quantity and quality are very important for a region’s competitiveness and economic development.

Second, the research extends the analysis to all foreign-born students (which include international students) in the higher education. The Washington DC Metropolitan Area hosts 104,253 foreign-born students in its higher education institutions, accounting for 21.5 percent of total enrollment. This share is slightly larger than the region’s foreign-born population’s share in its total population (21 %).

Compare to the national average of foreign-born student in total enrollment (12 %) and the share of foreign-born population in total national population (12.5 %), the Washington DC Metropolitan Area has a large concentration of foreign-born population and foreign-born students. While this region is home to 2.5 percent of nation's international students, it is home to 3.8 percent of the nation's foreign-born students, most of whom are working and contributing directly to the regional labor market.

These results indicate that the Washington DC Metropolitan Area is a larger magnet for foreign-born students than international students. One possible explanation is that the institutions in this region are more famous domestically than internationally. If this is the case, if the Washington DC Metropolitan Area would like to strengthen its international competitiveness, its regional institutions need to develop a better marketing strategy to target the international community. A second possible explanation is that the Washington DC Metropolitan Area's government-oriented labor market structure seems more attractive to the students who are authorized to work for the government's organizations. If this is the case, the local government needs to provide easier immigration pathways so that the international students will have a better chance to stay and contribute to the regional labor market after graduation, as well as to adjust and balance the structure of the labor market in order to foster other industries beyond the public sector. In addition, regional institutions' study specializations, fund sources, loan availabilities, and tuition rates are all points of concern in the endeavor of attracting more domestic and international students.