
The Impact of Korean Immigration on the US Economy

MARCUS NOLAND

Korean migration to the United States has occurred in three distinct phases. The first phase involved a relatively small number of migrants at the beginning of the 20th century; the second consisted mainly of students motivated by educational opportunity in the first decade or so following the Korean War; and the third started in 1965 with the liberalization of the US national quota system.

This chapter examines the economic impact of Korean immigration on the US economy, focusing on the third wave of immigration that began in 1965. This group of Korean immigrants appears to be distinct both from most other national immigrant groups and previous Korean immigrants. They have high levels of educational attainment, with rates of college education nearly twice the US national average. They form businesses at a rate 70 percent higher than the US public at large, and have savings rates of roughly twice the national average. Their children have achieved even higher rates of educational attainment and earn per capita incomes well above the national average. There is a correlation between the presence of Korean immigrants and state economic performance, and if this were interpreted as a causal relation, it would suggest that a doubling of the Korean immigrant population would increase national per capita income growth by 0.1-0.2 percentage points.

Marcus Noland is a senior fellow at the Institute for International Economics. He would like to thank Scott Holladay for excellent research assistance.

Korean Immigration to the United States

The first treaty on immigration between the United States and Korea was signed in 1882, and within a few years a small number of merchants, students, and political dissidents began arriving in America. It would be another 20 years, though, before significant numbers of Koreans came to the United States.

That process began in 1893, when American sugar and pineapple planters in Hawaii engineered the downfall of the Hawaiian royal family and declared Hawaii a republic. Hawaii was annexed by the United States in 1898 and declared a US territory in 1900. At that time, the immigration into the United States of Chinese laborers was prohibited by the Chinese Exclusion Law, so when the Hawaii Sugar Planters Association needed labor to break strikes by Japanese plantation workers, they turned to Korea. In 1902, King Kojong approved the first organized migration to the United States; the beginning of Korean immigration to the United States is conventionally dated January 13, 1903, when about 100 Korean immigrants landed in Honolulu. (Given that they are sometimes called “the Irish of Asia,” perhaps it is fitting that the first Koreans in America arrived on a steamer named the *Gaelic*.)

During the next 2 years, more than 7,000 Koreans arrived in Hawaii, most recruited as strikebreakers by the Hawaiian planters. But this predominant channel of Korean immigration to the United States was closed in 1905, when the Japanese government, concerned about the welfare of Japanese workers in Hawaii, successfully pressured the Korean government to halt emigration.¹ The passage in 1926 of the Asian Exclusion Act closed the door from the US side.

With respect to plantation workers, the Japanese could have saved themselves the trouble—the first-wave Korean immigrants, recruited mainly from urban areas, showed a distinct lack of interest and aptitude for plantation work and fled the plantations at a higher rate than any other ethnic group. However, with conditions deteriorating in Korea, few returned home. Instead, many settled in Hawaiian towns, especially Honolulu.²

About 90 percent of the Korean immigrants were male, and this immigrant community exhibited behavioral pathologies typical of other almost exclusively male societies. About 400 of the initial immigrants were Christian. The Koreans began to create social and political organizations in Hawaii, leaders of which tended to either be Christian, have a Korean farm background, or be married. The planters subsidized Christian mis-

1. For histories of this early immigration, see Choy (1979), and Patterson (1988, 2000).

2. A love of the city lights seems to be an enduring aspect of the Korean experience in the United States; according to the 2000 US census, the Korean rate of urbanization is exceeded only by that of Jews (Jeong 2002).

sionary work among the obstreperous Koreans with the aim of socializing them into better workers. Significant conversion occurred, and churches have remained an enduring part of Korean-American community life.

Due to urbanization and the unbalanced sex ratio (despite the practice of importing brides), the Korean community in Hawaii exhibited a high rate of intermarriage with other ethnic groups. By 1970, Koreans had the highest per capita income and lowest unemployment rate of any ethnic group in Hawaii. By the time the third great wave of immigration began in the 1960s, the process of acculturation had proceeded so far that the newly arriving immigrants did not recognize the thoroughly assimilated third-generation Koreans as distinct from Americans.

Of the Korean immigrants to Hawaii, more than 2,000 continued on the US mainland, settling on the West Coast. Several hundred settled in agricultural communities in central California and established prosperous agricultural businesses there, which were important sources of finance for Korean nationalists in exile. Indeed, the first president of the Republic of Korea, Syngman Rhee, along with other nationalist leaders such as An Ch'ang-ho and Pak Yong-man, emerged from this milieu.³ Although Koreans faced racial discrimination in the United States, with the advent of World War II, their antipathy toward the Japanese did not go unnoticed, either by the US government authorities or the general American public.

The second wave of immigration occurred in the decade following the Korean War and was dominated by students who came to the United States for graduate education. Some stayed, while many others returned to South Korea; a few such as Nam Duck-Woo, Kim Manh-Jeh, Lee Seung-Yoon, and Chung So-Young played important roles in the development of the Korean economy in the early 1960s.⁴ In addition to students, during this period around 3,000 Koreans annually immigrated as the spouses of US citizens (Jasso and Rosenzweig 1990). This group was overwhelmingly female, and presumably many were wives of US servicemen stationed in Korea.

The third wave of Korean immigration to the United States was made possible by the 1965 Hart-Celler Act, which greatly liberalized the National Origin Quota System and opened the door for greatly expanded immigration from non-European countries, including South Korea. The third wave of immigration differed significantly from the first two, in that the immigrants were often college-educated and brought families with them when they immigrated. Indeed, in numerical terms, this third wave and its offspring make up most of the Korean-American community today.⁵

3. See Cha (2002) and H.K. Kim (2002) for further discussion.

4. In addition to the immigrants being motivated by educational opportunities, starting in 1955 American couples began adopting Korean babies. Approximately 100,000 Korean adoptees became Americans between 1955 and 1998 (E. Kim 2002)

5. See Jeong (2002) and Y.S. Park (2002) on the third wave of Korean immigration.

Although many third-wave immigrants had a college education and were white-collar workers in Korea, they found that a lack of proficiency in the English language hampered the full exploitation of their Korean qualifications within the American economy. As a consequence, many shifted careers and started small businesses or purchased existing businesses of retiring non-Korean businesspeople, thus coming to dominate certain types of businesses (e.g., green groceries and dry cleaning) in American cities such as New York, Los Angeles, Chicago, and Washington.⁶ In this regard, they are part of a long American tradition of successive waves of immigrant businesspeople, following earlier immigrant entrepreneurs. Along with the ever-present churches, a support network of businesses such as restaurants, newspapers, and radio stations grew to cater to this community.

What seems to distinguish these third-wave Koreans from earlier immigrant groups is that a significant number of them were educated members of the middle and upper-middle classes. So while a lack of English language proficiency impeded their ability to continue their previous careers in the United States, they demonstrated a commitment to education and professional attainment, and their current occupational profiles may be a misleading indicator of their underlying capabilities.

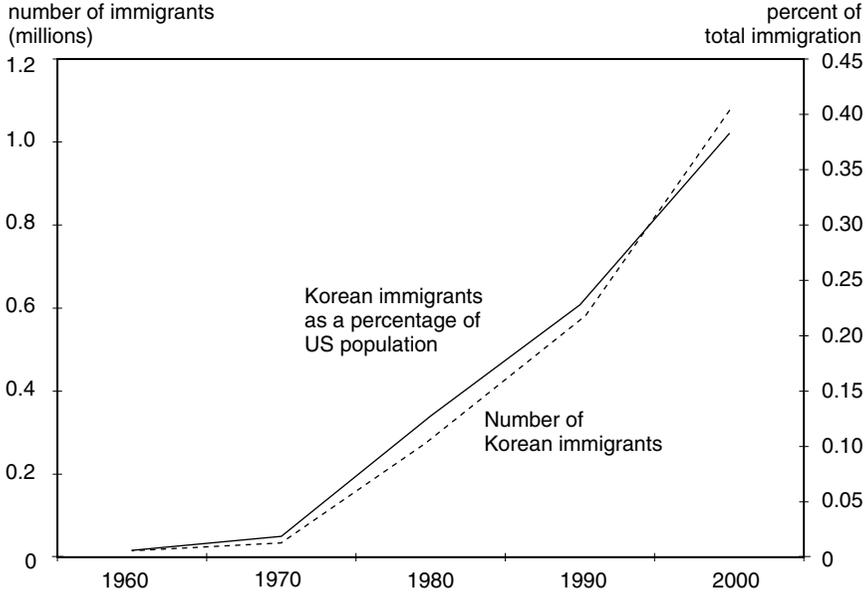
The trend in recent years has been toward a growth in the number of Korean professional service providers such as doctors, lawyers, and insurance agents, as the children of these immigrants have obtained professional accreditation in the United States, and some have opened such businesses oriented, at least in part, toward the Korean-American community. Data from the 2000 US census confirm the casual observation of upward mobility among the children of Korean immigrants, as is discussed below.

Statistics on the Korean-American Community

The number of Koreans in the United States has grown dramatically since 1960, when the US Census Bureau first began reporting Koreans as a distinct ethnic group. As is shown in figure 4.1, the number of “foreign-born” Koreans (i.e., immigrants) increased from roughly 11,000 in 1960, to more than 1 million in 2000, or about 0.4 percent of the total US population. According to data from the US Immigration and Naturalization Service, the peak year for Korean immigration to the United States was 1987, when nearly 36,000 Korean immigrants entered the United States (figure 4.2).

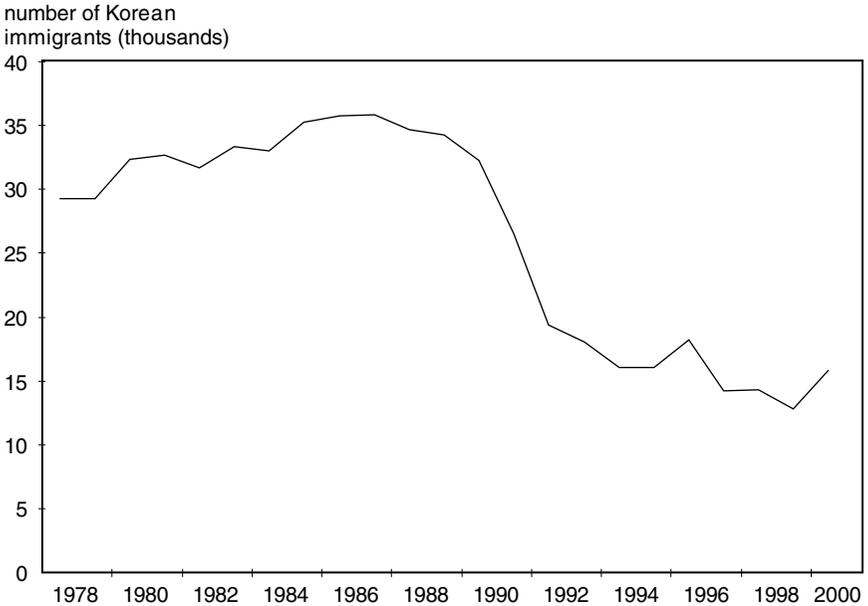
6. Often these shops are in inner-city neighborhoods, and one of the most memorable images from the 1992 Los Angeles riots was that of rifle-toting Korean retailers guarding their stores. According to Im (2002), the lives of 10,000 Korean immigrants were disrupted when 2,300 businesses were lost at a cost of approximately \$500 million during the rioting. See K. Park (2002) for a fascinating look at relations between Korean shopkeepers and their customers in South Central Los Angeles.

Figure 4.1 Korean immigrants living in the United States, 1960-2000



Source: US Census Bureau.

Figure 4.2 Korean immigrants to the United States, 1978-2000



Source: US Immigration and Naturalization Service, *Statistical Yearbook*.

Table 4.1 Korean business survey data, 1982-97

Measure	1982	1987	1992	1997
All businesses (number)	31,769	69,304	104,918	135,571
Gross receipts (thousands of dollars)	2,677,067	7,682,668	16,170,438	45,936,497
Businesses with employees (number)	7,893	21,657	n.a.	50,076
Gross receipts (thousands of dollars)	1,704,762	5,502,006	n.a.	40,745,504
Employees (number)	24,663	70,530	n.a.	333,649

n.a. = not available

Source: US Small Business Administration (2001, table A.4).

Since 1987, the number of Korean immigrants has steadily fallen to fewer than half as many, as improvements in the economic, political, and social situation in South Korea have made emigration less attractive. In this respect, the pattern of Korean emigration to the United States has followed the same trajectory of other “sending” countries, such as those in Western Europe.

More than one-third of these Korean immigrants are in California, where they make up about 1 percent of the population. The next most popular destination for Korean immigrants is New York, followed by New Jersey, Illinois, and Washington, DC. In proportional terms, Korean immigrants are most prominent in Hawaii, where they make up nearly 2 percent of the state’s population. According to Jeong (2002), if the children of immigrants and undocumented workers are added in, the Korean-American community in the United States is probably on the order of 1.5 million to 1.6 million people.

Census data indicate that Koreans are close to the US population median for household income (\$50,000 for Koreans vs. \$51,200 for all Americans) and per capita income (\$20,000 vs. \$26,000), and that the share of the Korean population having attained a college degree or better (49.2 percent) is almost twice the national average (26.8 percent). Jeong reports that an analysis of census data done by the Korean-American Coalition, a nongovernmental organization, found that second-generation Korean-Americans appear to be upwardly mobile, with median incomes of \$70,000, nearly 40 percent higher than the national average, and a rate of college degree attainment of 54.7 percent, more than twice the national average.

Korean immigrants exhibit a higher rate of entrepreneurship than the average American, with Korean-Americans in 2000 having a “business

7. For a survey, see Borjas (1999).

density" (i.e., persons per business) of 7.9, compared with 13.5 for the general population (US Small Business Administration 2001, table 12). This is to say that the Korean-American community has been creating businesses at a rate 70 percent higher than the rest of the population.

A Census Bureau survey of minority businesses found that in 1997, Korean-Americans owned 135,571 businesses, generating \$45.9 billion in revenue and employing 333,649 workers with wages totaling \$5.8 billion (US Small Business Administration 2001, table 11). These figures may be a bit misleading, though. Of the 135,571 businesses mentioned above, more than half (85,495) are sole proprietorships (US Small Business Administration 2001, table A.1). The 50,076 firms that pay employees average nearly 7 workers per establishment with average wages of more than \$17,000 annually (US Small Business Administration 2001, table 15).

This, in turn, represents a tremendous intensification of business activity from the already high level documented in the first Census Bureau survey in 1982 (table 4.1). If one applies the 1980 census population figure to the 1982 business formation data reported in table 4.1 (which would tend to lend an upward bias to the business density figure) this would yield a business density of 9.1—already substantially below the national average—which dropped even further to the 7.9 rate in 1997 as mentioned above. As a group, during a 15-year period, Korean-American businesses exhibited a more than 13-fold increase in employment and a nearly 24-fold increase in revenues.

In reality, these figures probably understate Korean-American economic clout. Sole proprietorships and small businesses often understate revenues and even employment. There is no reason to believe that Korean immigrants are atypically accurate in their responses. Ergo, because of their overrepresentation in occupational categories that tend to understate the magnitude of their business transactions, the figures above should be regarded as a floor on actual Korean-American business activity. Korean Americans have come a long way from breaking strikes on Oahu.

The Impact of the Korean-American Community

As the preceding section documented, the Korean-American community is characterized by a high level of economic achievement, entrepreneurial activity, and upward social mobility. It is reasonable to ask what the macroeconomic impact of Korean-American immigration on the United States has been.

Economists have identified a number of channels through which immigration can affect the economy.⁷ The most obvious channel is the labor market. Immigrants add to the labor supply, pushing down wages and raising the rate of return on land and capital. In a simulation model of undifferentiated labor demand, Borjas (1994) calculated that for 1994, the

Table 4.2 Regression results for US real per capita growth

Independent variable	Dependent variable	
	(1) Growth rate, 1950-2000	(2) Growth rate, 1950-2000
Income per capita, 1950	-1.02 (-7.64) ^a	-1.05 (-8.05) ^a
Dummy for Northeast	0.45 (6.48) ^a	0.44 (6.69) ^a
Dummy for South	0.25 (3.52) ^a	0.26 (3.71) ^a
Dummy for Midwest	0.14 (2.06) ^b	0.15 (2.25) ^b
Per capita state government spending, 1950	0 (-2.83) ^a	0 (-2.86) ^a
Percentage of Korean immigrants, 1990	0.46 (3.50) ^a	—
Percentage of Korean immigrants, 2000	—	0.32 (4.04) ^a
Constant	0.11 (9.23) ^a	0.11 (9.68) ^a
R ²	0.83	0.84
F	35.09 ^a	38.21 ^a
n	51	51

a. Significant at the 1 percent level.

b. Significant at the 5 percent level.

Note: Coefficients on all variables have been scaled by 100 for the purposes of presentation.

total gains to the US economy were only about \$6 billion—and that the amount of redistribution away from native workers (\$114 billion) dwarfed the net gain to the economy. Given uncertainty about the net fiscal effect of immigration (though immigrants pay taxes, they may also go on welfare and their children attend public schools), Borjas's analysis suggests that the net impact on native workers may well be negative.

But this approach seems at once too simple and ill-suited for the specific case at hand. First of all, labor is not an undifferentiated mass, and the particular immigrant group in question appears to be unusually well endowed in human capital. Modern endogenous growth theory suggests that human capital accumulation may be important in forestalling a declining marginal product of capital and a secular decline in growth in high-income economies (Romer 1986; Lucas 1988). Moreover, as the discussion above demonstrated, Korean-Americans have been unusually fo-

cused on the formation of rapidly growing new businesses.

This kind of entrepreneurial activity is probably associated with what economist Harvey Leibenstein (1966) described as X-efficiency—a key to the growth of total factor productivity and overall economic prosperity. Immigrant entrepreneurial activity of this sort is also likely to be associated with unusually high savings rates and capital accumulation. Carroll, Rhee, and Rhee (1999), for example, used data from the 1980 and 1990 censuses and found that Korean immigrants had savings and wealth accumulation rates around twice as high as the overall US population. Yet another way in which immigration can have an impact on macroeconomic performance is by contributing to international trade, thus stimulating global ethnic networks (Rauch and Trindade 2002).

So rather than the usual static demand-for-labor approach, a dynamic growth approach would appear to be more appropriate. The standard framework for empirical investigation is the “convergence” approach of Barro and Sala-i-Martin (1992, 1995), derived from the endogenous growth literature. In this approach, long-run per capita growth is a function of an initial starting point, the accumulation of physical and human capital, macroeconomic stability, trade openness, economic and political institutions, and so on. Although this work has spawned a vast literature on the determinants of growth performance across countries, it is particularly well suited for studying growth at the subnational level. This is because many economic phenomena that vary across countries, such as differential rates of inflation or differences in trade policies, can be ignored when examining developments within a single country using data on subnational jurisdictions.

Table 4.2 reports regression results for real per capita growth across the 50 states and the District of Columbia. Following Barro and Sala-i-Martin, the right-hand-side explanatory variables include the log of per capita income in the initial year of the sample and three regional dummy variables to capture regional affects. If poor economies grow faster than rich ones as predicted by the standard neoclassical growth model, then they are said to “converge,” and one would expect the coefficient on initial income per capita to be negative. To these variables we add two: state government expenditure per capita and the share of Korean immigrants in the state’s population. State government expenditure is a measure of the size of government, which has typically been found to be negatively associated with economic growth in many cross-national studies. In addition to these variables, a weather variable used by Barro and Sala-i-Martin (1992), state educational spending, and the state murder rate were also tried as right-hand variables, but they did not have any robust explanatory power, and in the interests of brevity, those regressions are not reported.

Because the boom in Korean immigration really began with the Immigration Reform Act of 1965, we would ideally like the sample to extend from 1965 to the present. But real per capita income data were re-

ported only every 10 years from 1950 to 2000. Likewise, Korean immigrants were only identified as a distinct group in the 1990 and 2000 censuses. The decision here has been to use the longest state growth rate sample available (i.e., 1950-2000) because we are really interested in long-run growth performance and want to abstract from transitory effects.

However, this raises a problem: Logically, Korean immigration in 1990 cannot cause differences in cross-state growth performance starting at an earlier date (in technical terms, the right-hand variable is said to violate exogeneity). As a consequence, it is really not proper to claim that Korean immigration caused the differences in state growth performance; rather, it is appropriate to state that Korean immigration is associated with or statistically correlated with these differences.

With that caveat, the results given in table 4.2 show that, as expected, initial-period per capita income is negatively associated with subsequent growth—that is, US states converge. State government spending is also negatively associated with growth. The presence of Korean immigrants, however, is positively associated with growth, with a coefficient of 0.46 in regression 1 and a coefficient of 0.32 in regression 2. This means that a 1-percentage-point increase in the Korean immigrant share of the state's population was associated with an increase of 32 to 46 basis points in the state's real per capita growth rate.

However, it should be kept in mind that Koreans made up only 0.4 percent of the US population in 2000, so percentage points are probably the wrong unit to use in assessing this result. Instead, suppose the Korean immigrant share doubled (i.e., the share of Korean immigrants in the US population increased by 0.4 percent). Then, according to the results in table 4.2, this would be associated with an increase of 0.1 to 0.2 percentage points in the growth rate of per capita income.

Conclusion

This chapter has examined the impact of Korean immigration on the US economy. Korean immigrants have been found to have rates of educational attainment nearly twice the US national average; to create businesses at a rate roughly 70 greater than the general population; and to maintain savings and wealth accumulation rates roughly double the national average. The children of these immigrants exhibit even higher rates of educational attainment and incomes approximately 40 percent higher than the US population as a whole. There is a statistical correlation between the presence of Korean immigrants and state economic performance, and if this statistical correlation were interpreted causally, it would suggest that a doubling of the Korean immigrant population would increase national per capita income growth by 0.1 to 0.2 percentage points.

However desirable this might be, it is unlikely to come to pass. The flow of Korean emigrants peaked in 1987 and has since been falling. Economic, political, and social improvements in South Korea have diminished the lure of emigration, and in this respect the pattern of Korean emigration to the United States follows the same historical trajectory of other sender countries such as those of Western Europe. In addition, the 1992 Los Angeles riots may have reduced the attractiveness of the United States as a destination, though this is not apparent in the date reported in figure 4.2.

An interesting issue for the US economy will be whether the descendants of today's Korean immigrants will reproduce the same process of assimilation and acculturation that previous immigrant groups have experienced. For example, it could well be that the children and grandchildren of today's immigrants will manifest attitudes toward risk and entrepreneurship much closer to the American mainstream than to those of their risk-taking forebears. This could be an interesting topic of investigation at conferences celebrating the bicentennial of Korean immigrants in the United States.

References

- Barro, Robert J., and Xavier Sala-i-Martin. 1992. Convergence, *Journal of Political Economy* 100, no. 2: 223-51.
- Barro, Robert J., and Xavier Sala-i-Martin. 1995. *Economic Growth*. New York: McGraw-Hill.
- Borjas, George J. 1994. The Economic Benefits from Immigration. NBER Working Papers 4955. Cambridge, MA: National Bureau of Economic Research.
- Borjas, George J. 1999. The Economic Analysis of Immigration, in *The Handbook of Labor Economics*, Volume III, eds., Orley Ashenfelter and David Card. New York: North-Holland.
- Carroll, Christopher D., Byung-kun Rhee, and Changyong Rhee. 1999. Does Cultural Origin Affect Saving Behavior? Evidence from Immigrants. *Economic Development and Cultural Change* 48, no. 1: 33-50.
- Cha, Marn J. 2002. The First Korean Towns in the Mainland U.S.A.: Reedley and Dinuba, California. Paper presented at a conference on Korean Americans, past, present, and future, sponsored by the Industrial Council on Korean Studies and Centennial Committee of Korean Immigration to the United States, Falls Church, VA (August 16-18).
- Choy, Bong-youn. 1979. *Koreans in America*. Chicago: Nelson-Hall.
- Im, Hyepin. 2002. From Marginality to Creativity: Korean American Immigrant Churches Setting Their Own Course. Paper presented at a conference on Korean Americans, past, present, and future, sponsored by the Industrial Council on Korean Studies and Centennial Committee of Korean Immigration to the United States, Falls Church, VA (August 16-18).
- Jasso, Guillermina, and Mark R. Rosenzweig. 1990. *The New Chosen People: Immigrants in the United States*. New York: Russell Sage Foundation.
- Jeong, Dong K. 2002. Comparative Analysis of Social and Economic Mobility Among Korean, Chinese, and Japanese Americans in the United States. Paper presented at a conference on Korean Americans, past, present, and future, sponsored by the Industrial Council on Korean Studies and Centennial Committee of Korean Immigration to the United States, Falls Church, VA (August 16-18).

Comments on Chapter 4

SOOGIL YOUNG

In chapter 4, Marcus Noland tries to assess the impact of Korean immigration on the US economy by quantifying the contribution of Korean immigrants in the United States to the economic growth of the states where they have lived. His hypothesis is that Korean immigrants contribute to the growth of local economies by increasing the productivity of the local capital stock through the human capital they embody as well as by enhancing the X-efficiency of local economies, helping to form productive capital by saving more than the average American, creating many new small local businesses as a result of their strong entrepreneurial ability, and facilitating trade between the United States and South Korea. And though the lack of the necessary census data prevents him from statistically confirming this hypothesis, he does statistically establish that the presence of Korean immigrants is positively associated with the growth of local economies. I have six groups of comments to offer on this chapter.

First, Noland's hypothesis sounds plausible, and we want to believe that Korean immigrants contribute to accelerating the growth of the US economy. But he fails to prove that this is the case. In fact, the actual causation may equally plausibly be the other way: The high growth poles of the US economy, such as New York City and Los Angeles, could be attracting Korean immigrants. I believe that in reality the causal relationship operates in both directions and that the causality from the growth pole to the arrival of immigrants runs stronger than that in the opposite direction.

Second, at a more fundamental level, I believe that Noland's attempt to measure the macroeconomic impact of Korean immigrants on the United States was doomed to fail in any case because the Korean immigrant population's 0.4 percent share of the total US population would have been too small to generate a statistically discernible impact on the performance of the US economy. In contrast, microeconomic analyses could have yielded more meaningful and interesting insights on Korean immigrants' impact on the US economy. To give an example, Noland states that Korean-

Soogil Young is former president of the Korea Institute for International Economic Policy and Korea's former ambassador to the OECD.

Americans are unusually concentrated in the formation of rapidly growing new businesses, such as green groceries and laundries. Accordingly, I believe that Korean-Americans are having a significant impact on local economies in a few specific business sectors.

I have done a rough calculation (using data from the Korean Ministry of Foreign Affairs and Trade) of the number of ethnic Koreans registered at South Korean consular offices in the United States by occupation. It indicates that, as of 2000, “own businesses” accounted for 48 percent of the total, consisting of 20 percent for commerce, 16 percent for services, and 2 percent for manufacturing. I believe that all of these own businesses qualify as small businesses. Let us take green groceries in New York City as an example. (This in fact seems to be the most prominent example that I can cite.) In the city, Koreans have established a 24-hour green grocery on nearly every other corner and have come to claim 80 percent of the market.

The impact of these green groceries on the local economy should be multifaceted: the ready availability of fresh fruits and vegetables and such basic foodstuffs as milk, bread, flowers, and delicatessen items; their lower prices and higher quality (including freshness); much greater consumer surpluses; higher local employment; and revitalization of neighborhoods, including safer and cleaner streets. And there are likely to be other similar benefits from businesses such as laundries.

Third, there is a significant category of Korean immigrants, which should have been examined by the author—that is, professionals, such as medical doctors, nurses, lawyers, accountants, and financial analysts. I believe that a substantial number of Korean immigrants are in these professions. For medical doctors and nurses in particular, I recall that there was a wave of immigration from South Korea to the United States during the Vietnam War, which must have served to alleviate the shortage of these professions in the United States, contributing to lower costs and a higher quality of medical services. I wonder how large the contribution of Korean immigrants has been in these professions. My rough calculation indicates that, as of 2000, professionals accounted for 2.0 percent of Korean immigrants. This figure seems to be rather small, and it may be interesting to find out whether this smallness is due to supply-side constraints or US immigration policy.

Fourth, the author indicates that the community of ethnic Koreans in the United States is about 50 to 60 percent larger than the number of Korean immigrants, which is about 1 million. The children born to Korean immigrants in the United States account for the difference. These second-generation Korean-Americans are doing far better than their parents economically. According to Noland, their median income of \$70,000 is 1.4 times the US national median income of \$50,000. This is so because their parents have made sure that their children receive a good education so that their college-degree attainment ratio is 55 percent, twice the US

national average of 27 percent. This, in turn, means that Korean-Americans work hard to be able to finance concentrated investment in the human capital of the United States. In this way, they contribute to a more knowledge-based, more productive profession and workforce, ultimately contributing to the growth dynamism and vibrancy of the US economy. The Korean-Americans' enduring contribution to the US economy seems to be found here.

Fifth, Noland observes that Korean immigrants come from the middle and upper classes of South Korea, which have very high education levels. His analysis also indicates that once in the United States, despite their hard work, they earn about 30 percent less than what their children earn when they grow up. It would be interesting to try to explain this earnings gap. The answer, however, seems to be obvious. The gap seems to be mostly a composite measure of the lower quality of education and poor English-language teaching available in Korea. By the same token, it shows how much Korea may gain economically by improving its educational system and the English-language proficiency of its people. I regard the latter as an important requirement for efficacious communication with the global community, of which the United States may be taken as a microcosm.

Sixth, Noland mentions the contribution that the Koreans who returned home after their graduate education have made to South Korea's economic development. This is a very important point that should have been treated much more extensively. On the whole, Noland by far understates the contribution made by the US educational system to Korea's economic development.

The number of Korean PhDs educated in the United States—most of them largely funded by US scholarships during the period up to the early 1980s—was very small in the early 1960s. And most of the returnees in the 1960s were readily recruited into important posts in the science and economic policymaking process, rising to the highest-ranking posts in the 1970s under the then-president Park Chung-Hee. The most outstanding case of an economist in this regard has been that of Nam Duck-Woo, who served as minister of finance for a number of years and subsequently as special assistant for economic affairs to President Park during the 1970s and as prime minister under President Chun Doo-Hwan during the 1980s.

However, the number of Korean PhDs educated in the United States has increased steadily since the 1960s. And though they have been spread equally over both natural sciences and social sciences, during the period up to the mid-1980s, there was in fact a marked concentration in engineering and economics, in particular. The number of Koreans seeking a PhD-level education in the United States began to increase rapidly as, with Korea's economic takeoff in the 1960s, the demand for PhD-level thinkers, and for engineers and economists in particular, began to increase rapidly.

This increased demand was especially connected with the establishment of two government-funded think tanks, the Korea Institute of Science and Technology and the Korea Development Institute, in the early 1970s. These two institutes were created by the order of President Park Chung-Hee for the purpose of inducing the return of foreign-educated (mostly in the United States) PhDs in engineering and economics by offering “huge” economic compensation as well as a comfortable research environment. The two institutes were so successful in encouraging Koreans to undertake a PhD-level education in the United States, as well as in inducing the return of US-educated PhDs, that more government-funded think tanks with the same purpose have since mushroomed. As of today, tens of thousands of US-educated PhDs are scattered throughout all disciplines and make up a very large majority of all PhDs in Korea as well as the mainstream of Korea’s brainpower.

These PhDs have been making a more and more broadly based, systematic contribution to the sustenance of South Korea’s rapid industrialization and high economic growth since the mid-1970s. And their contribution has covered not only economic policymaking but also social policymaking, engineering, and research and development. It should be obvious that the US educational system has contributed to the creation and continuation of Korea’s economic miracle through the brainpower of these PhDs and that the US economy in turn has benefited in many ways because Korea’s high economic growth has been accompanied by the flourishing of trade and other mutually advantageous economic interactions between the two countries. The Korean students who are studying in the United States—who are now nearly all financed by their parents or employers at home—are doing so to be able to contribute to such relations between Korea and the United States in the future.