BROOKINGS INDIA

KAMALNAYAN BAJAJ CONFERENCE ROOM

Development Seminar @ Brookings India: Indian Migration to the United States

New Delhi

Wednesday, January 24, 2018

Brookings India

Second Floor, No. 6, Dr Jose P Rizal Marg

Chanakyapuri, New Delhi – 110021

India

Ph: 011 2415 7600

PARTICIPANTS

Neil G. Ruiz (Associate Director at the Pew Research Center) - Speaker
Shivender Singh (Vice–president, NASSCOM) - Discussant
Shamika Ravi (Director of Research, Brookings India) – Chair

*****

PROCEEDINGS

Shamika Ravi: So, good afternoon. Namaskar, welcome to Brookings India. This is part of the seminar series which we call 'Development Seminars' at Brookings India. Today's seminar is on Indian migration to the US. It's quite a sensitive topic, one that straddles economic research, foreign policy, trade, and we are particularly excited to have one of ours who's now at Pew, Neil Ruiz, who is going to speak about Indian migration to the US. Neil will present his data and statistics, his research for the first 45 minutes and then we have Mr Shivender Singh, Vice President Local Trade Development from NASCOM who's going to comment and then we'll have a Q&A for the last half an hour. So, Neel, the floor is yours.

Neil G. Ruiz: Thank you very much, Shamika, and thank you very much everyone for coming. It's nice to be back here at Brookings India. I was here back in 2014, I believe, and it's nice being part of Brookings back then and being here in India.

So, today, I'm going to talk about Indian migration to the US. This is a compilation of different research I've done from foreign students on H1B's and also looking at demographic work about Americans who are of Indian descent. So, just to give you a little bit of background about Pew Research Centre. Pew Research Centre is a fact tank – so we're not a 'think-tank', we work a lot on facts. We're nonpartisan, nonadvocacy, we don't do

any policy, so it's very different from Brookings in the sense that we don't talk about policy but we do a lot of surveys, so you've probably seen a lot of our worldwide surveys. We're in 40 different countries. We do a global attitude survey, asking various questions from what do they think about the United States, what do they think about the leaders, who's leading the world, to even specific surveys like we just recently had Muslim Americans serving in the United States as well as one of Moslems in Europe. But we also do a lot of demographic work; my group which is a new program of Pew Research Centre, is the Global Migration and Demography Program, which is a spin out of our Hispanic Trends, where we've been focusing more in the US but now we're really focusing around the globe.

First, I'm going to start off with Demographic characteristics about Indians in US, then I want to move on to looking at specific flows into the US. First, you see that the Asian population in the US…

Shamika Ravi: So, before you get into the empirics, could you tell us a little bit about the sampling and who are these people that you're surveying.

Neel: So, this data here is not based on any survey, this is based on demographic work based on US census data as well as the various data sources that I got from administrative data from

visa programs in the United States. So, right now, when I look at demographics, I'm going to focus more on US census data that gives us a little bit of a sense of the population that's living in the United States currently. So, this is focus more on stock data. Here you see that the overall Asian population in the US has grown 72% since 2000, it's been a large growth, and you see that Asians in general are projected to become the largest immigrant group surpassing Hispanics. As we know in the US, especially when you talk about immigration, a lot of focus has been on Hispanics in particular because of the talks about the wall with the Mexican border as well as the talks about the undocumented immigrants. But when you look at the projections that were done by the US Census Bureau, you see that Asians by 2065, will actually surpass Hispanics in terms of the immigrant groups.

Now, let's focus specifically on the Indian population in the US. Again, this is stock data from the US Census Bureau, this is of Indians – those who identify as Indians in the Census Bureau, so they can be those who are recently migrants as well as those who are second generation or third generation. But you can see that the Indian population in the US has doubled since 2000. Indians are the second largest group among Asians in the US and this is from 2015 numbers. You can see that China–Chinese are

still the largest, almost 5 million but Indians are almost 4

million among Asians among immigrant largest groups in the US.

Now, looking at specifically about US immigrants, you can see

that Indians are the third largest group. You can see Mexico is

the largest source of immigrants to US, followed by China, India

and then the Philippines. Now, this is a little bit harder to

read but the gist of this slide is that it…

Q: the projections which you gave for 2065 said that Asians

would have increased to 38% but the projection is based on the

growth rate of the last one, 15 years alone?

Neel: Correct, yeah, so they go backwards.

Q: If you went further back, then it's unlikely to be.

Neel: So, those are just projections that the Census Bureau

makes so that's also any changes that could happen with

immigration policy can impact those numbers. So, the US Census

Bureau usually just revises them every year and I'm sure they're

working on the revisions as policy changes. So, this slide just

looks at Indians in particular. They're a very highly educated

population in the US, 72% of Indians in the US have a bachelor's

degrees or above compared to other Asian groups in general (51%)

and the general US population, only 30% have bachelor's degrees

or above. So, Indians in the US are extremely highly educated.

And in terms of income, very high. Indians have the highest medium household income of $100,000 per year, followed by Asians in general who all have a high income as well for $73,000 and then followed by the general US population, which is about 53%. So, not only a highly educated but makes sense they're also with high incomes. Now, this looks at kind of naturalization rates, so taking a look more about just recently since 2005, you see here that more recently, that Indians in particular have a high naturalization rate. This means that many Indians who are in the US, when they enter as a non-immigrant, as either an H1b or other visa programs, once they get their green card, they're actually going for their US citizenship, so this has been a huge surge especially since 2005. And you can see here, they're tied with Ecuador in terms of the percentage point change in terms of naturalization.

Q: What is the trigger, like we mentioned the trigger for India?

Neil: So, there's different triggers. I mean, some people, especially a lot of reports have been, especially given the political environment now, a lot of people want to get their US citizenship. So, you could live in the US with a green card as a permanent resident and you could live in the US, you don't have the rights to vote but you could work anywhere but naturalization is actually important if you actually want to

vote. So, you could see that the Indian population in the US has in particular been using that right to actually get citizenship and will be voting in the next elections.

And now next, you see here, poverty wise, very low; you see, Indians have 7.5% poverty rate. So, again, given that they're very highly educated as well as high-income, this makes sense, it's not surprising.

Q: do we have any of this aggregation by generations?

Neil: We do, I don't have it here but the US Census has it whether those who are foreign-born versus those who are the US-born. So, you do see that US-born, yeah, I don't have that deciphered but you can actually, the Census Bureau data will allow you do that.

And now here, this slide just gives you an idea of those who have been living in the US for 10 years or more and you can see here, Indians actually fall more among Asian groups more in the lower end but still a majority of 57% of Indians in the US have lived in the US for 10 years or more. But you see historically, there are other groups like Laotians and Hmong, who have entered as refugees in the US, Cambodia and Vietnam and Filipinos, who have been there much longer and lived in the US but this just gives us an idea that Indians in general, there's still a huge recent migration into the US and that's why it's a little bit

lower compared to other Asian groups. And here's just an idea of where Indians are concentrated. They're concentrated mostly in large cities, you see here especially in the coast but also in parts of the Midwest or in the south like in Dallas and Houston, places where there are high tech hubs.

So, now I'm going to turn. Now, we have a kind of a snap picture, a picture of demographics of Indians who are living in the US, let's look at the main migratory force to the US, there are two; foreign students as well as those who are entering as H-1b visas. So, this is a different data source. The first part of my presentation was focused on US Census Bureau data which only just gives us an idea of the stocks of Indians who are in the US, now this data set is very different. This is looking at the student exchange visitor information system, or what is called SEVIS. This was a database that was created post September 11th in 2001 where the US kind of collects a lot of data on foreign students who were entering as F1 visas and this data I was able to do a freedom of information app; you could request the US government for this data, I waited several months until they gave this to me and then I've been continuingly requesting it more and getting more data. Previously, I published a report under Brookings with this data back in 2014 and now I've been updating it and looking at new data.

So, this is not that data but this is looking at the stock in terms of the International Institute of Education (IIE). They do an annual survey of to give us a stock number of international students and we've seen that there's been over 1 million foreign students study in the US in the 2015-2016 school year and they've also said it's starting to flatten, given the Trump effect and this has been heavily covered in the United States. There is no sense, we don't know yet if this [hatchery] is going down in particular but I think I requested that data and I will know probably in the next couple of months once I get that data and be able to tell you if it's true, if there was indeed an effect or a decrease. But as of now, the IIE has said there's been a slowdown but we won't know those numbers until we actually see the visa data. So, the large populations of students coming to the US are from China, India and South Korea who all account for more than 50% of all foreign students pursuing higher educational degrees in the US and you can see here the India's second next to China. In the US, just to give you a context, we've had a big recession back in 2007 and a lot of universities in particular were hurt in terms of their budgets were cut and slashed by state budgets and what happened is that a lot of public colleges were in particular targeting foreign students abroad so that they can raise extra revenue since they pay for Freight. In the US, a lot of state

universities are subsidized usually in state or US students and then foreign students pay the big-ticket price, the full price. So, you can see here, I looked at numbers using the visa data from 2008 to 2016 and looking at public versus private. So, I took the visa data and kind of categorized all of the data by public universities or private universities, no one's done this before, trying to understand was there really a big growth of more public universities for foreign students. And you can see here both private and public have grown but especially, public universities, you see it doubled from 2008 to 2016.

Now, this one, I disaggregated it looking at the different degree programs and it's actually quite fascinating because you could see here by degree programs, I mean associate's degree – this is not a four-year degree, this is more of a two-year degree – you see it doubled for both public and private but what's particularly interesting seeing here is the bachelor's degree – and this is not really an Indian story but it's more, especially from China and South Korea – where you see a 150% increase of those studying bachelor's degrees at public universities. But you do see the master's degree program – this is actually an Indian story – where you do see a lot of Indians studying at a big growth in private universities in particular but also in the public and you can see there was a dramatic 108%

increase of master's degree foreign students in private universities. Doctorate, it's not very interesting, it's pretty much flat. There hasn't been a big growth, I guess because it doesn't really make the universities money and usually those programs are funded by universities usually. And this one, a little bit hard to read but it just gives us an idea of the costs. So, the data did give us an estimate of how much students are paying per year and basically, this slide shows that the public university have increased their costs, especially for foreign students, those who are paying a full frame. So, you can see here that those that a bachelor's degree at public universities, the tuition has been grown by 312%. And you can see here also for bachelor's degrees at public universities, about 209%, basically, the gist of this slide is saying that there have been major increases in the tuition, especially for foreign students studying in the United States.

Q: Do you have a comparison with the domestic students?

Neil: So, to compare this with domestic students is difficult because for domestic students, we don't know that they could get financial aid, so I don't have that but this gives us idea, and we don't have that data for every domestic student. And this just gives us the idea of the most popular universities where foreign students are going to, categorized by public and

private. University of Illinois, Urbana-Champaign, that's the number one public university with foreign students in 2016 and they have large programs of engineering and a very wonderful, I guess a very popular college of engineering. Then you see here Pen State University, Arizona State as well as Purdue, which also has a very big large College of Engineering, very popular especially among Indians and Chinese. For private universities, NYU, Shamika – where she got her PhD – that's the number one most popular private university for foreign students followed by Columbia, USC in California as well as North Eastern University up in Boston.

So, we now have an idea of the foreign students but what happens after they graduate? So, I took the same data on foreign students and tried to understand who's actually staying. So, this program is called the OPT (or optional practical training), so if foreign students want to stay, they could stay in the United States for 12 months if they do not have a STEM degree – that's a science technology engineering math degree – but if they do have a STEM degree, they could stay currently for 36 months. So, here is the data from 2008 to 2014 and you can see huge jumps and this has a lot to do with policy changes that occurred. So, back in 2008 when comprehensive immigration reform failed in the United States under George W. Bush, George W. Bush

used executive order and just expanded those who graduate with

STEM degrees to stay for 29 months after they graduate but if

you don't have a STEM degree, it's still 12 months. And then

after about 2013/2014, President Obama extended it to 36 months,

so you do see still after that odd jumps as well. So, OPT again,

this still the main purpose of the OPT was literally just for

extension of your studies. It was meant not as a work or

employment base visa, but really meant as kind of to study and

extend for a year or so what you learned in college. But then

what we see here, the most popular Indians and Chinese account

for more than half of all OPT approvals from 2012 to 2015 and

you could see here that it's not on the chart but when I was

calculating employment rates, because the data allowed me to do

that because it gave me an idea if someone was approved and if

they actually found employment, so you can see here that those

who graduated with STEM degrees actually had a 75% employment

rate compared to those with non-STEM majors. So, once you

graduate, you have to apply for OPT. You have to tell your

university that you're wanting to get it and you have to get

approval from the Department of Homeland Security in the US

government but you have only three or seven months to find

employment. You could intern, you can work as an intern as well

as you actually don't have to get paid, so you could actually be

a yearlong intern and under your OPT.

Q: What are the data for China?

Neil: For China, actually, India is more popular than China, China is second in terms of number of OPTs. But this chart that I've shown here, the whole point here is looking at more of the focus on STEM and you can see here that India and Iran actually have their forms those who are going on OPT, about 84% of those from India actually have a STEM degree. So, that means Indians can stay most likely 36 months and as well as those who are from Iran and Iran is very fascinating because the foreign students who come to the US from Iran are particularly studying for PhDs, especially in Engineering and Math. And then, so the data itself also that I got from the US government gives me all the employer names. This one is quite messy though, so an ideal world, I would have liked to have every employer be able to tell you ranking of all the employers but the problem with the data is that you have variations of employer names, there's no standard name; so, Apple could be Apple Incorporation, Microsoft – Microsoft Corporation, various names, so it was hard to actually do a full universe of all those employers. So, what I did is I just took the Fortune 500 companies and then looked for those names and cleaned up the data based on company names for the Fortune 500 and this is just an idea from the top 10 tech companies in the Fortune 500 that have the highest market

valuation. You can see here that about 3.5% of all those under OPT program are working for these top 10 Fortune 500 companies.

So, now you go from a foreign student, you go to OPT and remember, these are temporary non-immigrant visas. That means your intention, if you were studying in the United States as a foreign student, is not to immigrate, meaning to become a permanent green card holder. And if you apply under the embassy or a consulate, they'll probably tell you or ask you a question, "do you plan on staying longer?" usually you're told never to stay you want to stay longer than your visa program because the visa program itself was meant to be a non-immigrant visa. But now we're going to look at a different visa program, the temporary employment visa system that the US still continues to have and this is actually the main pathway for a long-term retention in the US, especially for those who are studying in US and especially for many Indians who didn't study in the US but are coming under for an employer.

Q: The OPT employees, do we know if there is any salary difference/wages difference between OPT and non-OPT?

Neil: So, I have requested that data but unfortunately, the US government doesn't collect OPT salaries. It has the employer data but it doesn't have salaries, that would be a great question and be wonderful to know because I know that's been a

very important policy issue because people were discussing if

someone's going to be working for free for 36 months versus

those who are getting paid, so we don't have that data

unfortunately. But now, we do have data for H-1Bs. So, here

under the H-1B visa program which I know a lot of you in India

hear a lot about and in the US, we hear a little bit about as

well but the h-1b visa program as you know, is a temporary visa

program and its employer base, meaning employers apply for hire

someone and then they actually petition for someone to actually

get an h-1b visa. So, there's two types of employers under the

h-1b visa program; there are those who are uncapped, which is

not in this chart, those are educational institutions, non-

profit organizations, research organizations like Brookings, who

are cap doesn't apply. But then there are those capped

employers. What does it mean to be capped employer? Well, the

way the immigration system works is that every April on April

1st, employers have to submit applications for their visa

applicants, their petitions and it's usually done on a first-

come first-served basis. During the recession, you can see here

actually, during the recession, you had less demand than those

supplied, so there's 65,000 h-1b visas under the cap and in

another 20,000 for those who are graduates of US universities in

advanced degrees, so a total of 85,000. So, before 2008, you see

that there was barely reaching the cap in terms of over

exceeding the supply and during the recession, you can see here fiscal years 2010, 2011, 2012 and 2013, there really was no problem, maybe it took maybe up to 10 months until the h-1b visa cap was filled. But then when the economy was getting stronger after the recession, you can see her from fiscal year 2014 onwards, you see that there was over exceeding of the supply and you could see higher demand and during those years, after the first week, the US government does a lottery. So, they accept all the applications for the first week and then they do a lottery that selects who gets the h-1b visa. So, this has been highly contentious in terms of employers talk a lot about whether, especially a lot of tech companies that this is not a logical way of doing things but this is how the US government's been doing it for a while and there's been a lot of discussion about revising this and there's been a lot of legislation to revise this but it still hasn't been changed.

Q: Have there been industry quotas or just randomly?

Neil: So, it's all random. The one requirements that they have to have a bachelor's degree or above with one exception, and it's a very interesting exception, for fashion models. So, h-1b visas do have less than 1% fashion models and this has to do with a legislation that was actually introduced by congressman Weiner, who's been very unpopular in the United States but at

the time he represented New York which was the capital of fashion industry in the United States that was put into h-1b visas. So, you do have fashion models, companies that represent fashion models who are also competing with tech companies.

Q: [Indistinct]

Neil: It hasn't been revised since but that's one thing, but it's very small, less than 1%. But now you can see here, this is the story from India. You see here since 2001, about half of h-1b visas have been awarded to Indian nationals and you can see here by far over 50% and you can see here, next is China which is just under 10% followed by the Philippines at 3%. So, really, large majority of h-1b visas are from India. But this is also another research that I've done, where I was taking the data from the Department of Labour and using what's called 'Annette Department', looking at the type of skills that are required, the job postings are required for the type of jobs that h-1b are applying for. And what you see here, when I did that, you see that actually not all the jobs actually require a bachelor's degree. So, you can see here that about 26% of the jobs actually that h-1bs are getting only require a two-year degree, but still a large majority — 64% — require a bachelor's degree and then followed by master's and doctorate. But the large, again, 90% of the h-1bs require STEM skills. So, again, STEM is very highly

sought out, especially in the tech industry and especially in our world now with a lot of Technology dependence.

And here's just a distribution by States. You can see California, of course, the home of Silicon Valley, is number one in terms of h-1b visa approvals followed by New Jersey, Texas, New York. On the right side, you can see I took the data and looked at per 1,000 workers in general in the states, so you can see that New Jersey's actually quite interesting, you have 9.4 h-1b visa approvals per 1000 workers in the New Jersey labour force. Then this is another piece of research where I looked at the salary. So, the data that the US government released was looking at, this is back in August, they released actually a lot of salary data to the public. And you can see here that the median salary for HM Brooks has increased to $80,000 over the past decades, so you can see her back in '07 it was over $69,000 and now it's median is $80,000. Then I actually just kind of wanted to give us an idea of what's going on with one of the most popular occupations, which is computer and mathematical occupations and this is a broader category of the occupation but you can see here that comparing for the general populations, they could be foreign-born or domestic born but you can see that salary is a little bit lower than those who were paid by h-1bs. Now, this slide looks at all the employers, we actually have

employment-employer data on salaries that the government released last year and you can see here companies with the highest number of approved h-1b visa applications; Cognizant Technology Solutions is the largest one that received in the fiscal year 2016 and you can see the average salary. So, you can see that these are still very high salaries, these are not very low salaries in general but you can see here that more of the IT service companies like Cognizant, Infosys, Tata, Wipro, Accenture, have been paid a lower salary than Microsoft's, or Amazon or Facebook, because actually here you could see Facebook's about a $140,000, just down in the bottom, about $140,000 a year is what they're paying their h-1bs. But this also just reflects the different industries, most of the lower salaries here are from IT service or computer occupations whereas other ones like Facebook or Microsoft, these are more PhD kind of research oriented employees but it just gives us a sense. And there's a lot of controversy around this because there's a lot of controversy about how much should you pay h-1b visa workers and people look to this to politicize or understand that's what's going on.

So, now we have the h-1b visa program and the h-1b visa program itself, there's actually many purposes of the h-1b visa program. You have those who are using it for just a temporary basis,

meaning there's no intention of getting a green card; you have those who want to get a green card afterwards — I know that Microsoft in particular applies for an h-1b and a green card on the same day, yeah, so those are the kind of the two main categories of the use of h-1bs; for temporary or if you want to stay for permanent. But now, the h-1b visa program has dual intent, what does that mean? You can actually use it for those two purposes. Originally, it was only meant as a very temporary program but then the government amended it through legislation to allow those who are going for H1-Bs to stay and apply for a green part if their employer sponsors them. So, you can see here, the US green card system. Those green card means those who are permanent, they have everything that many US citizens have in terms of the rights, except the right to vote, meaning they're very mobile. H-1b visas are usually attached to your employer, so you have to actually stay with an employer typically who sponsored you, whereas once you get a green card, you could work anywhere and you could change jobs, it's very much easier to do that. But the US government and the US green card system is highly focused mostly on families sponsored immigrants, so those are not those who are at the employment base visa immigrants. You can see here, about 144,000 per year green cards are given to employment base those who are sponsored, whereas the majority 65% are from family. Those are

family members who are already US citizens, they're applying for their immediate family or other relatives to come to the United States and join them. And this has been kind of a legacy of the United States immigration system, a very family based system but a lot of people have been debating around here whether or not they should shift it more towards more a skills-based or an employment based system.

But you can see here also we have the diversity visa program, which has been talked about a lot in terms of cutting. Diversity visa program is a program that was made for the US to accept – countries can apply kind of like a lottery – from countries that don't have a lot of immigrants that come to the United States and every year, they select about 50,000 and so it's very popular, especially in Africa in particular where a lot of people are applying and they get the luck of the draw and get a green card to come in the United States. But when we actually look at the data for green cards, most of the people the large majority who are who are getting green cards are those who are adjusting status. What does that mean? They're already in the United States. So, these are those who are waiting for an h-1b visa or other programs, they're already in the US compared to new arrivals. What does this mean? This means that a lot of people are already in the US as residents but they don't have

the rights that a green card would give you and a lot of h-1b

visas and especially for Indians in particular, have very long

wait times United States because the way the green card system

works is that no country can get more than 7% of all employment

base of green cards. You see there, it's only 140,000 and so

India and China - you saw the numbers for foreign students - are

huge countries in general and just large countries coming to the

US to study. So, what does that mean? Long wait times. So, for

India, people are waiting, if they get sponsored for h-1b, for

10 plus years and as well in China about 6 plus years. So,

that's why just large majority are actually adjusting status, so

they're already working or in the United States but just waiting

for the green card. And this is the last slide, it just gives us

an overall picture for lawful immigrants. In the United States,

there's a lot of conversation talking about illegal immigrants -

which you see on the very left - the unauthorized immigrants,

that's the estimate that we make at the Pew Research Centre, so

there's about 11 million unauthorized immigrants. But on the

right side, we look at those who are lawful, 'lawful' meaning

they came through a visa program or getting a green card. And

you can see here, temporary lawful residents, those are those

who are called TPS - Temporary Protective Status - like from El

Salvador, Honduras, those who are escaping political problems or

catastrophes abroad, the US usually historically has allowed

them to come to the United States but that itself also currently

has been removed or allowed to expire for some countries like

Honduras, El Salvador. But you can see here that in terms of

lawful immigrants the US, you have about 19.8 naturalized

citizens, those who actually went through the whole process,

whether they were sponsored from a family member or went through

the whole process from foreign students to H-1Bs to green cards

and actually got their citizenship and can finally vote in the

United States. And then you can see here, there's about 12

million lawful permanent residents those who currently have a

green card.

And that's it. so, I'm open to questions about this. There's a

lot of data here and I think in the United States, there's a lot

of conversations about how to revise the lawful immigration

system and I think for India in particular, because a large

majority of Indians are actually going through the visa system,

especially as higher-skilled, this is a particular area of

interest. Thank you very much.

Shivender Singh: Thank you very much for inviting me to come

and speak to you today. I think great presentation Neil. A lot

of things people are more or less aware of but nonetheless,

putting together and positioning it in the way you did, I think

it's phenomenal. What I plan to do is to kind of, you know,

obviously you've seen the Indian migration trends, you've seen the fact that Indians who go and migrate to the US are highly educated, they are highly paid, there is also a link which has been drawn on H-1Bs and STEM degrees. A lot of Indians, in fact, 90% are focused on STEM degrees, within that also they look at OPT as one of the options and then you see the graduation into H-1Bs, which also has a very strong H-1B STEM focus. So, these are the common threads and trends and although I would love to focus on the fashion 1% part but I'm sorry, I probably don't have the credibility to do that, so I'll focus more on the mundane part which is more on the Indian tech side because I represent the Indian tech industry and try and draw a linkage to the kind of migration discussions that we are talking about.

If you look at the Indian tech Industry, and I am talking specifically of the Indian IT industry, Indian IT industry is a very export driven industry. Out of about 150 plus billion dollars of revenue that we have, nearly 120 billion is exports. Out of 120 exports, nearly 70 billion, about 61%, is the US. 17% to 18% is UK, the rest of Europe is about 11% and that doesn't leave too much for the other parts of the world, which we are trying to see how we could expand that. Now, if you look at the success that we've achieved from about a $100 million in early 1990s to $150 billion dollars that we stand today, that's

primarily because of the very successful global delivery model that the IT industry has, which means that one of the big issues that we have seen around the world is the STEM skills gap and there are various studies across and I'm not going to get into individual, which does talk about STEM skill gap around the world. We in India are slightly better placed because of A – the population; B – the fact that traditionally, we have had our strength in STEMs and hence, we're kind of moving forward in that area. So, the industry has focused on STEM and as a result of which has been able to achieve a fair bit where they hire locally and they bring in people with STEM skills on short-term to do projects. Now, around the world, this has been very successful including the US because the gap is very ably bridged by the STEM people who are brought on short-term non-immigrant visas. So, we talked about the education part, we talked about the OPT part and then Neil talked about the H-1B, so I'd focus more on the h-1b part here and how companies tend to bring people across the board. So, that is how this has worked and the United States has a very ambitious program on trying to develop STEM skills in the US. One of the problems which you see and if you look at statistics, is that although people are doing stem in the US, a lot of people don't practice it as a profession also, so that's creating an artificial gap within STEM skills and we face this issue around the world.

Why are my kind of hopping on this gap being bridged? It's because I'm trying to link it now to the kind of geopolitical environment that we face around the world today. So, what are the kind of issues that we face? Let us look at it. Around the world, except few places which are bright sparks, there is unemployment to a great degree. We have seen the refugee crisis which has happened primarily in Europe but also impacts many other regions and as a result of which, you see migratory trends into developed economies from some of the other countries. Now, what has happened as a result of this is, there is clubbing of the issue of unskilled migration on one hand vis-a-vis unemployment being created on the other hand. And hence, the term 'migration' becomes a very very toxic term and anyone who talks about it talks in those terms. The problem, when I link it to the tech industry is, high-skilled non-immigrant migration also gets clubbed into the whole migration debate. We've tried our level best to segregate the two, it doesn't get segregated. I was there the day Brexit happened in London and we know why Brexit has happened, the immigration issue was the biggest issue why Brexit happened, we are seeing this around the world. So, what we see as the problem in terms of, and our Prime Minister talked about this whole anti-globalization protectionism yesterday at the World Economic Forum, so there is this trend of protectionism to try to protect jobs and we facing this in India

as well in a big way where there were huge job losses in the tech industry and there were questions being raised on that. So, that is where the crux of the problem is.

The crux of the problem is STEM skills gap, you need to bridge the gap. How do you bridge the gap? You bring in people. The problem is if you bring in people, we call it high-skilled worker mobility, we don't even call it migration because at the end of the day, the people who come in to do projects don't alter net migration numbers in our country, they come and do a project and they go back. So, these people are in great demand and this has to be linked, especially in the tech world right now, in terms of how the evolution is happening from legacy business that we used to do to digital transformation. So, whether it's big data, whether it's cloud, whether it's artificial intelligence, whether it's robotics, whether it's machine to machine, all of that is totally transforming the whole scenario. Now, just to let you know, we're doing a lot of work on future of skills and upskilling is going to be the big focus area because when we say that from 10% the industry revenues are going to grow to about 40%, I'm talking about globally in terms of digital, that's great but where is the skills going to come from? Because what used to be a transformative phase, which used to happen once in 10 years is

now happening once in a quarter. Our companies themselves don't know where the next upskilling is going to come from, so what we have done is we are working with Boston Consulting and a couple of other people and we've identified eight new emerging technology areas and 55 job roles and then looking at how we go to manage that.

Now, coming back to the US and some of the migratory trends, and I wanted to link this part to it, is the Indian industry has been facing a lot of problems because of this in the US and it's both led by the administration as well as the Congress and a lot of legislation on the H-1B is driven by myth rather than reality. So, the general perception is that Indian companies take the maximum of h-1b visas, absolutely false. The second perception is, and the fact is the numbers have declined rapidly, so what Neil talked about the cap numbers of 65,000, the top 7 Indian IT companies which constitute more than 90% of the h-1b visas just take under 10,000 which is about 17/18%. Yes, Indian nationals get about 70% of the visas but that's a testimony to their strength in terms of the STEM skills that they have. The second is in terms of people on H1-B get paid less, Pew Research has done the research themselves, I'm not going to repeat that but there are many other research which points out to the fact that h-1b workers are not being paid

less. The third is that they replace American workers; that's also not true because in the US, nearly 21 million people lose jobs every year but that's the greatness of the American economy where 23 million new jobs get created. And what happens in terms of some of the job losses which we are talking about? It's not even more than a thousand and that's also not linked to H-1B because people who come in have a different skill set than people who go.

So, where are the challenges coming from? The challenges which are coming from are based on the fact that there are restrictions being proposed on the so-called dependent companies or 50/50 companies. I don't want to get into too much of technicalities but dependent companies are companies which have more than 15% and above on visas, that includes all the Indian tech firms and we are facing a lot of problems because this will mean discriminatory challenges being faced in terms of wage levels, discriminatory challenges being faced in terms of skills. Because when an h-1b is going to get allotted, this is probably going to be considered and how do you define who is more skilled, whether it's a PhD in Computer Science or whether it's a big data crack expert? It depends on companies and with all due respect, a federal bureaucrat will not be able to know who is more skilled because it depends on the needs and

requirements of a particular company. So, these are the kind of challenges which we are facing. Within the US-India bilateral relationship, the tech industry has a very key role to play. From $100 billion to $500 billion which is a joint target of promoting the bilateral trade, the tech industry is going to play a major role. Our role as an industry association is try and highlight some of these myths and perceptions which are there and the value which our companies bring to the table in terms of creating local employment more than 100 thousand, paying more than $5 billion dollar per annum as taxes and making so much of difference too by working with more than 80% of the Fortune 500 companies, most of them being American companies enabling them to grow/create more jobs.

So, that is our job which we are trying to do jointly through the government of India, directly with the US administration and the legislature and we will continue to highlight that within the realms of the broad Indo-US bilateral relationships. So, these are some of the challenges which you see we are facing and we need to kind of work on this as we move along but I'd kind of stop here and if there are any questions, very happy to answer them. Otherwise, thank you very much and I look forward to engagement.

Thank you very much.

*****

*****