



New solutions to close the skills gap

On December 15, 2011, the Atlantic Council and PwC hosted senior leaders from business, government, and academia to discuss the skills gap that threatens global economic growth. This note summarizes the main points of the discussion.



Summary

On December 15, 2011, the Atlantic Council partnered with PwC to host an inaugural high-level roundtable of leading business, government, and academic experts to analyze the global mismatch between skills and jobs, better known as the “skills gap,” and offer policy solutions. This report summarizes the conclusions of that discussion.

Despite an 8.3% unemployment rate, employers across the United States continue to have difficulty filling millions of available jobs. These jobs remain vacant because employers cannot find the qualified workers they need. President Obama’s Council on Jobs and Competitiveness blames this mismatch between the skills of the workforce and open jobs on up to one third of the current US unemployment rate. It is important to note that the skills gap is not simply an American problem. In fact, according to PwC’s annual survey of global CEOs, an inability to find enough skilled talent is the number one concern of business executives around the world. In fact, only 30% of the respondents felt confident that they would be able to find the talent they need to grow their companies.

Unfortunately, the current skills crisis marks only the beginning of a much longer-term trend. Closing the skills gap should remain a top priority for businesses, governments, and academia. Especially during times of extended long-term unemployment, significant investments in workforce development are critical to restarting economic growth and increasing worker productivity. At the same time, budgetary constraints at the national and local levels will force business to play a lead role. Since the private sector profits most directly from access to skilled labor, the onus is on businesses to work hand-in-hand with community colleges and universities to develop programs that teach the skills they are searching for. Investments in preparing today’s young workers to succeed in the modern economy will continue to pay dividends for years to come.

The Atlantic Council and PwC are committed to promoting effective policy development by engaging business, academia, and policymakers together to target the skills and talent mismatch.

Conclusions of the conversation

- 1. The talent challenge is restraining business growth worldwide.***
- 2. Although there are effective models of business and education working together to improve training, not enough businesses are taking advantage of them.***
- 3. There are multiple pathways to success—including vocational training and two-year community college accreditations.***
- 4. In the US, only a fraction of the money spent on training goes to retraining existing talent.***
- 5. If current job openings were filled, the US unemployment rate would drop by one to two percent.***
- 6. Governments, businesses, and schools must act collectively to address training issues.***
- 7. European nations are investing more heavily in training than is the US.***
- 8. The economic impact of skills development is hard to measure.***

Welcome session

PwC Global Chairman Dennis Nally opened the meeting, linking the talent challenge to long-term prospects for economic growth, underlining, “If we do not get the talent agenda right, the long-term viability and competitiveness of the US economy will be at risk.”

The world in which people with a single set of skills could stay with the same company for their entire careers is gone. In today’s workforce, employees must constantly upgrade their skills not only for career advancement, but just to stay competitive in their current jobs.

Frederick Kempe, president and CEO of the Atlantic Council, reminded the audience that the ramifications of today’s educational challenges extend beyond America’s economic competitiveness, and are essential to global security. He quoted former National Security Advisor General James Jones, who has said that America’s declining competitiveness is today’s defining national security issue. Economic vulnerability leads to strategic weakness and a diminished ability for the West to project hard and soft power. If the transatlantic community wants to be able to shape the world in its preferred image, we must regain our economic competitiveness. The first step is developing a world-class workforce.



Session 1

The business of skills management: Assessing the costs and returns of investments in talent strategies

- ***The talent challenge is restraining business growth***
- ***Employers are doing more with less***
- ***Examples of successful training programs exist***

The talent challenge is restraining business growth

Employers struggling to find qualified employees cannot grow at the pace they desire, or quickly enough to satisfy demand. In 2011, a survey of nearly 40,000 employers across 39 countries revealed that 34 percent of these employers are having trouble filling positions.

For the fifth year in a row, the jobs considered most difficult to fill include technicians, sales representatives, and skilled trade workers. Employers in India, the US, China, and Germany experienced the largest talent shortages compared to the previous year. China, for example, considers this challenge so serious that they have made talent development a core element of the Communist Party's most recent Five Year Plan.

In the US, a staggering 52 percent of employers are having trouble finding the talent they need. And it's likely that the situation will worsen before it gets better. In order to reduce the unemployment rate back to 5 percent, the US needs to create over 21 million new jobs by 2020. There will likely be a shortage of two to four million skilled workers to fill those jobs.

Employers are doing more with less

One way that employers are reacting to having to do more with fewer highly skilled employees is to demand a lot more out of each of them. They are requiring their people to develop specialized skills, and are using several methods to bring that about. Yet there is a limit to continued productivity growth, so businesses are also looking elsewhere for solutions.

Nearly 25 percent of employers reported that they are changing their recruitment strategy. Their goal is to make human capital as mobile as financial capital. Around half of these companies are extending their search for talent beyond the local area, and 11 percent are changing their branding strategy in an effort to reach a wider audience of qualified job-seekers.

Examples of successful training programs exist

Businesses should work closely with educational institutions to address talent issues, as there are many examples of successful collaborations between those institutions.

Right Skills Now, one of the most successful programs, is a collaboration among business, education, and government launched through the President's Council on Jobs and Competitiveness. Working with The Manufacturing Institute, ACT, Inc., and the National Institute for Metalworking Skills, Right Skills Now provides an educational pathway to postsecondary credentials with immediate value in the manufacturing industry. Its graduates have a clear path to success—and a job waiting for them.

The sixteen-week training course aligns to career pathways in manufacturing. The students—of any age—earn college credits toward a degree, receive nationally-recognized certification, and get hands-on technical experience. This training is followed by an eight-week internship at a company, after which they can choose to either remain with the company or continue their education. The program is now available at two colleges in Minnesota, and the state is paying for all the required testing. Several other states and schools have expressed interest in emulating this model.

Another successful program is a result of collaboration among the President's Council, the Business Council, Business Roundtable, the US Chamber of Commerce, National Association of Manufacturers, and the American Chemistry Council. They have come together to assist the private sector in educating and training 10,000 additional engineers. The retention rate for first- and second-year engineering students varies between 15 and 60 percent depending on the area and school, with most program dropouts selecting an easier vocation with less intensive study requirements. The partnership therefore encourages private companies to create internship programs that give students a better idea of what real engineering jobs entail to encourage them to continue their studies.

Retaining talent is as important for companies as acquiring it. Some companies are encouraging employees to use their skills to pursue personal interests. For example, Google allows employees to spend one day each week—20 percent of their time—on projects they are passionate about.



Session 2

The policy of training and skills: What can and should government do?

- **Money is not being spent efficiently on training**
- **Excellent government training models exist**

Money is not spent efficiently on training

America's public investment on human capital development amounts to between \$1.5 and \$2 trillion annually, with only a fraction of that going into retraining of people already in the active labor force. Some examples of legislation supporting training include the Perkins Act (America's main investment in career and technical education); and the Workforce Investment Act. The funding for each is under attack. For example, in the omnibus appropriations bill, passed December 14, 2011, the House reduced funding for training support.

There is a major debate underway in the United States about the proper roles of the federal government and the private sector in funding these programs. Some believe the federal government should play no role whatsoever, while others believe that more government action is essential.

A high school diploma should provide people with the necessary skills for success in a job right away, or for post-secondary education at a four-year university, community college, or a trade school. All students' work should be measured by rigorous academic standards, and they should have the opportunity to apply what they have learned in a career.

Right now the quality of the community college system, in particular, needs improvement. This is a difficult issue to tackle from Washington, however, since community colleges are overseen by the states.

Excellent government training models exist

There are some excellent models integrating education with training. One of the best is the Integrated Basic Education and Skills Training (IBEST) program, in Washington State. IBEST takes individuals with very low skill levels, and instead of putting them through traditional remediation programs, which have abysmal results, enrolls them in classes teaching a combination of basic and technical skills.

Students learn occupational skills that are directly transferable to the job market. They are motivated to master sometimes difficult subjects like algebra and English because they can see exactly how improvements in those areas will help them find work. The success of IBEST has led other states to emulate this model.

Some successful workforce training programs are developing around specific industrial sectors that face a shortage of available talent. Before designing the training program, all skills necessary to succeed in a given industrial sector

“If we were to pull out of our national commitment and leave the states completely on their own—Delaware competing against India, and South Dakota competing against China—I believe we would not have a positive future as a competitive national entity. We need a national commitment [to skills development].”

— Scott Cheney, Staff Director, Senate Health, Labor, Education, and Pensions Subcommittee on Employment and Workplace Safety

are analyzed to determine what methods and techniques should be taught. Then, employees begin programs designed to train them for each particular skill set.

Although the UK developed sectoral models first, the US has learned from the British example—as in Seattle, where successful programs are training employees to succeed in both the city’s large aerospace and gaming sectors.

Retraining current employees to handle new and more complicated tasks is as important as training new ones. Successful retraining programs need to be flexible, recognizing, for example, that mid-career professionals often cannot study full-time. They require ways to study while fully or partly employed, as well as income support to enable them to “earn and learn” at the same time. Since such funding is unlikely to come from the federal government, finding appropriate resources remains a significant challenge. This is an excellent opportunity for the private sector to work in partnership with state and local governments to develop new programs which help modernize their employees’ skill sets.

“The mantra is that college is great for everyone. Yet in reality fewer than one in three people actually graduates from a four-year institution within four years. So we need to reach out, to communicate with schools, with guidance counselors—especially those who have no clue about the many technical trades today.”

— Darlene Miller, CEO, Permac Industries

Session 3

Rethinking education: New approaches to foster new skills

- **There are multiple pathways to successful careers**
- **Vocational training can be the right choice for many**
- **A new compact among educators, business and government is needed**

There are multiple pathways to successful careers

The Pathways to Prosperity Project of the Harvard Graduate School of Education was created to answer two fundamental questions about American education:

- 1) Why, despite all the attempts to fix our schools, has progress been so difficult to achieve?
- 2) What would need to be done to significantly change things for the better?

One attempt to fix our schools was the No Child Left Behind Act, which promised that by 2014 every child would be proficient in math and science. We are not even close to achieving that goal.

The Great Recession has created additional incentives to improve educational outputs, since today's youth unemployment rates (almost 20% in the United

States, up to almost 50% in Spain and Greece) are at their highest levels since the Great Depression.

In the next decade one-third of newly created jobs will require a four-year college degree, and one-third will require some college but less than four years. So there are multiple roads to success for young people. Society needs to understand that universities are not for everyone, and there are valuable opportunities available to those without a four-year degree.

While university graduates are doing comparably well, less than one in three people actually graduates from a four-year institution. For many of the other two-thirds of society, vocational training could provide a richer opportunity for success. But we have overlooked those job seekers that have completed some college, although less than a Bachelor's degree.

We have consistently under-invested in community colleges, technical colleges, and programs that are

“We may be doing a good job of educating the next generation of the elite, but if you look at the population as a whole, we’re increasingly failing to prepare many young people to lead successful lives as adults.”

— Bill Symonds, Pathways to Prosperity Project, Harvard Graduate School of Education

designed to equip workers with skills demanded by today's employers. Those without relevant skills will have to compete for the bottom third of newly-created jobs, which require only a high school education but offer low pay and provide few benefits.

The Pathways report suggests that the definition of 'success' should be changed from requiring that everyone achieve a four-year university education. For many people, a community college or technical school would be a better fit. We should also expand apprenticeship programs that allow students to learn applicable skills on-the-job as well as in the classroom.

The answer to the first question that the Pathways report asked—why has more progress not been made to “fix our schools”?—is that we have taken too narrow an approach. The one-size-fits-all approach of a four year college experience for everyone hasn't worked for most young people.

Vocational training can be the right choice for many

What would a broader, more holistic education system look like? Positive examples can be found in the 2010 OECD report *Learning for Jobs*, which notes that in many of the most successful countries in Europe, over half of the students are enrolled in vocational education programs.

The learning is highly focused. Students, for example, take no electives. In the dual-apprenticeship model—found in Germany, Switzerland, Denmark, and Austria—students spend an average of three days a week outside the classroom learning skills off-campus. At BMW, Porsche, and Mercedes Benz, for example, students learn the physics, engineering, and math required to design and build luxury cars.

After analyzing results from 17 countries, the OECD concluded that for most teenagers, vocational education is the most effective way to learn. They also found that this approach better facilitates the students' entries into the labor market.

The model of learning-by-doing is not confined to vocational schools. Some of our most skills-intensive professions use the same approach. At Massachusetts General Hospital, for example, a doctor who trains surgeons who already have doctorates in medicine begins by telling them that they will be judged solely on how they actually perform operations. No classroom-learning will take place. And some will fail because they lack the dexterity to perform difficult operations perfectly.

Students who receive some vocational training at the same time they are taking academic courses tend to do better in those courses than students taking only academic courses. In Massachusetts high schools, the

graduation rate for mixed curriculum students is 10 points higher than for students in traditional courses.

A new compact among educators, business and government is needed

Returning to the second Pathways question—what must be done to change things?—there is a two-part answer: employers must take a more active role in curriculum development to ensure adequate workforce education; and there must be a new compact among educators, business, and government to work together to develop efficient training programs.

A number of states have already held conferences to try to create such a compact. Oklahoma, for example, began several years ago when it passed a property tax to support efforts to make the state a leader in skills development. They built regional technical centers that promote collaboration between local colleges and businesses.

The Tulsa Center, for example, focuses on skills related to diesel mechanics since the city is a major transportation hub. The graduates are 19 to 20 years old and begin jobs earning \$40,000 annually. Another Oklahoma tech center, located near the main American Airlines maintenance facility, focuses on fostering the skills necessary for maintaining jet engines.

Politicians across the state, as well as local business leaders, strongly support the Oklahoma programs. Employers have expanded their roles in several ways: resolving career guidance issues by clearly indicating what current and future skills are needed, helping develop high-quality curricula so graduates will be prepared to enter the workforce, and providing opportunities for work-based learning. The challenge lies in taking such local initiatives and implementing them nationwide. The first step will be to change the culture so the dominant notion is no longer that the only path to success is via a four-year university degree. That will require a national conversation requiring some re-thinking about how we talk to young people.

Equally important is to overcome the stigma of enrolling in training programs. Most current programs are not adequate to prepare people for the skills needed in today's economy. We must find the political will to create high-quality programs and take them to scale.

A successful example is in New Bedford, MA. While the graduation rate at the local high school is only 50 percent, the Greater New Bedford Regional Technical School's graduation rate is 92.5 percent. The school is no longer large enough to accept all qualified applicants and must turn away hundreds of students each year. We need to design schools like this nationally.

Session 4

Global lessons: Experiences from abroad

- **Some nations pay for nearly all training for the unemployed**
- **There is very little good international evidence on direct measurement of skills**
- **Cooperation among employers, educators, and government can bear fruit**
- **Many employers are seeking skills from abroad**

Some nations pay for nearly all training for the unemployed

In Northern Ireland the central government pays for nearly all of the training for the unemployed, with large investments devoted to apprenticeship programs. The state also pays for all community college job training programs. Investments target those sectors most likely to result in productivity gains and job creation.

The two major challenges facing the Northern Irish economy are increasing productivity while also increasing employment. Although the graduation rate is between 85 percent and 90 percent, not enough students are studying science, technology, engineering and mathematics (STEM)—the courses that offer the most opportunities in the modern workforce.

Northern Ireland subsidizes apprenticeship training, but first requires that an apprenticeship opportunity exists with the employer. Almost half of the apprenticeships are set aside for mid-career professionals over 25 years old.

Through the Skills Solutions program, employers engage with the state, explaining their business needs; and the state responds by designing specific training programs to meet those needs. Where the employer has its own training program, the state

encourages it to have that training properly accredited so it can be measured and transferred if the employee leaves the company.

Like many countries, Northern Ireland is debating whether to attempt to pick industrial “winners” with the training focus primarily on their needs, or instead to invest for flexibility in the workforce so it can adjust to whatever natural winners the market reveals. For the short-term, labor-intensive industries like tourism and hospitality are the most attractive investment opportunities for state training funds.

Skills development is hard to measure

While everyone recognizes the importance of countries and companies being able to benchmark their skills against their competitors, there is very little good international evidence that directly measures skills development. The usual measurement is a proxy measure based on the educational attainment of the workforce. But formal education is not a particularly good measure of the so-called “foundation skills” of literacy, numeracy, problem-solving and teamwork. And the tests that directly measure the foundational skills are now very out of date.

Therefore the OECD developed a new survey—the “OECD Program for the International Assessment of Adult Competencies (PIAAC)” —that measures the foundational skills of households across 30

“We have a culture for investing in the economic drivers rather than simply cutting back on taxes or regulation in expectation that the market will take over and jobs will be created.”

— Stephen Farry, Minister of Employment, Northern Ireland

countries, not all of which are OECD members. It will survey thousands of people in each of those countries. However, the survey is not likely to be completed before 2018.

Currently, 75 percent of the investments employers make in an average worker occur before that worker reaches age 30. The OECD survey will see how various countries might provide incentives to make investments mid-career and beyond, to foster ongoing skills development. Another issue the survey will address is the effect of companies principally investing in those who already have the highest skill levels, while underinvesting in lower-tier workers.

Cooperation among employers, educators, and government can bear fruit

In the United States, a key issue is how to design and implement an effective vocational education and apprenticeship program—as many European countries have done successfully.

Why such a program has not evolved in the US is related to the lack of a serious long-term commitment to vocational training from business, unions, the education community, and the government. A major unresolved issue is how the public and private sectors, and the apprentices themselves, would share the costs of such a program.

Germany provides an illustration of what can be achieved through cooperation across relevant sectors. Before the current recession, the German apprenticeship program began showing signs of slowing down. The government brought together the unions and employers, stating that 150,000 apprenticeships were needed and that it would help fund them. Despite the recession, a national compact with all parties created thousands of new positions for young trainees.

That contrasts sharply with the US, whose youth unemployment rate is higher than it has been in

generations. One-third of young workers have been out of work for over a year and one-fifth for over two years. One reason that the US is not as well-prepared to cope with periods of extended unemployment as some other OECD countries is the lack of an apprenticeship option after high school.

Many employers are seeking skills from abroad

Currently OECD countries spend on average between 0.7 percent and 0.8 percent of GDP on labor market policies to assist the unemployed—particularly the long-term unemployed—find work. The comparable share of US government spending is around 0.16 percent. State unemployment insurance offices are not capable of delivering the high-quality retraining services that are needed due to a lack of resources.

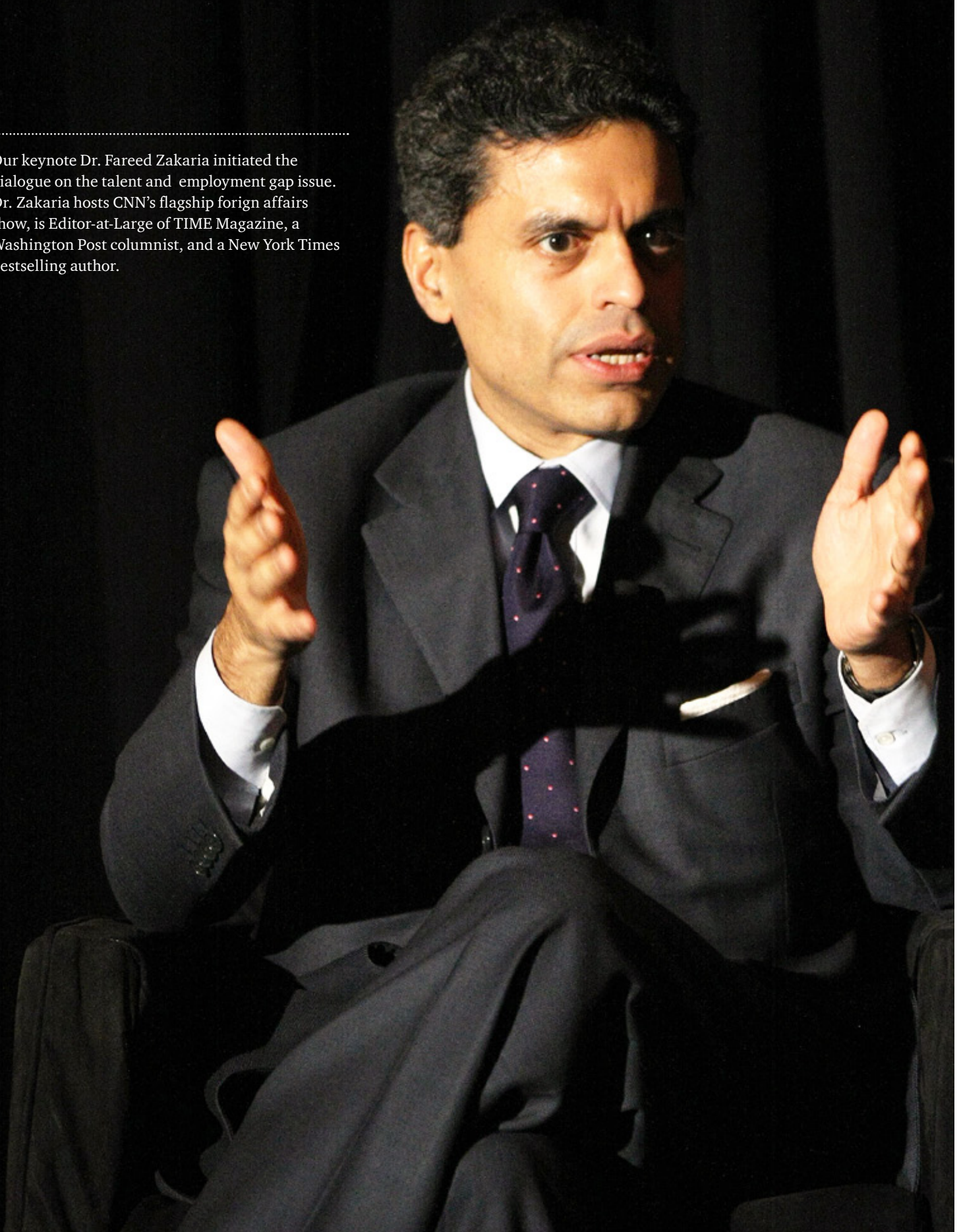
Many employers are therefore importing skills and talent from abroad, which can be a winning formula for all involved. It adds to the export earnings of the country which provides higher education to foreign students. The employers in the country of education benefit because they recognize the qualifications that the students have acquired. And it is good for the students themselves if linked with easier access to the host country’s labor market.

Admittedly immigration can create a clash between economic concerns and national security. Right now, the US appears to be tilting towards security concerns. Sweden, however, has taken a very different approach. It has made labor migration essentially free. Any employer who has been in Sweden since 2005 can fill any vacancy with a foreign worker so long as the working conditions and pay meet the minimum requirements negotiated in collective agreements. Although there has been some increase of foreign workers coming to Sweden, there has been no deluge—and companies are finding easier access to the talent they need.

Conclusion

The meeting began a conversation about solutions to the very serious problems of talent and training. PwC and the Atlantic Council look forward to continuing this conversation among business, government, and academia as we collaboratively search for further solutions.

Our keynote Dr. Fareed Zakaria initiated the dialogue on the talent and employment gap issue. Dr. Zakaria hosts CNN's flagship foreign affairs show, is Editor-at-Large of TIME Magazine, a Washington Post columnist, and a New York Times bestselling author.



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Note: The conclusions presented in this document do not represent the consensus of the group.

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