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PUERTO RICO
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2012 | Revitalizing Innovation

SKILLS FOR GROWTH IN PUERTO RICO

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PLAN OF THE TALK

- The Importance of Skill
- Resources and Challenges In Puerto Rico
- Towards Best Practice



EDUCATION AND ECONOMIC GROWTH

Well educated regions can respond to economic shocks and adapt

--Pittsburgh, Rochester

Well educated regions have higher rates of entrepreneurship

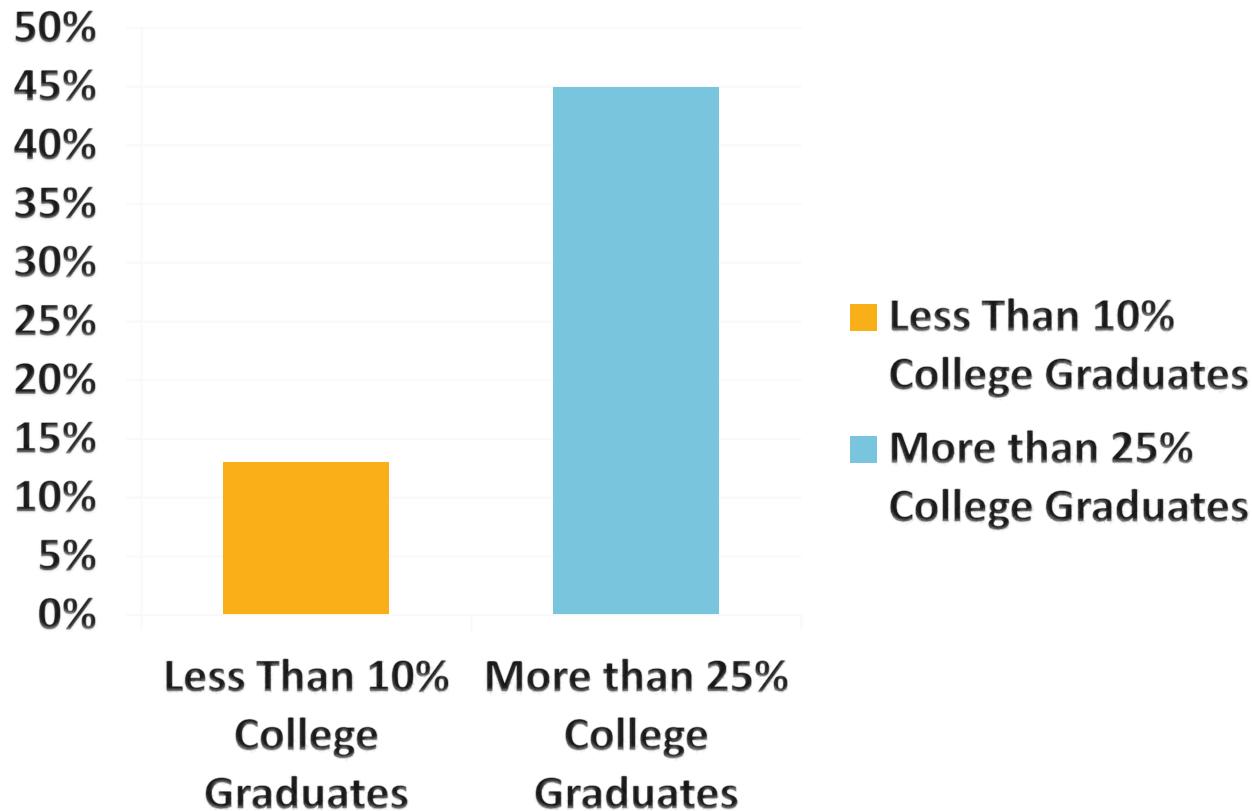
--college graduates (and older people!) more likely to be self-employed entrepreneurs.

Firms are more productive if their workforce is well educated and trained

--more on this in a moment



METROPOLITAN ECONOMIC GROWTH



Source: Glaeser and Saiz

HOW SKILL OF FRONT-LINE WORKERS PAYS OFF FOR FIRMS

- Enables lean staffing
- Enables flexibility in products
- Enables an emphasis on quality
- Encourages innovation
- Improves customer service

TOYOTA'S COMMITMENT TO LEARNING

"All the organizations we studied that are managed according to the Toyota Production System share an overarching belief that people are the most significant corporate assets and that investments in their knowledge and skills are necessary to build competitiveness."



Steven Spear & Kent Bowen
Harvard Business Review
September-October, 1999



?

**THERE IS GOOD EVIDENCE
ON EACH OF THESE
POINTS....**



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TRAINING AND SKILL PAYOFF FOR FIRMS

- Michigan Study: Training subsidies to manufacturers reduced scrap rate by 13%
- Study of 388 firms: strong positive correlation of human capital investments and growth in stock price

MODERN PRODUCTION SYSTEMS DEMAND SKILL

- Careful studies of the automobile industry show quality correlated with training
- Careful studies of steel show production line uptime correlated with training

THE SAME IS TRUE IN SERVICE INDUSTRIES

- Customer retention in banks correlated with skill level of front-line workforce
- Sales by CSRs in call centers correlated with training

SO THE BOTTOM LINE...

- For region or a country growth is tightly linked to skill
- For a firm success is tightly linked to skill



FURTHER EVIDENCE ON THIS POINT

- There is great interest in clusters as a development strategy
- Successful clusters consciously use skills and training as central elements in their strategy

--Singapore

--North Carolina

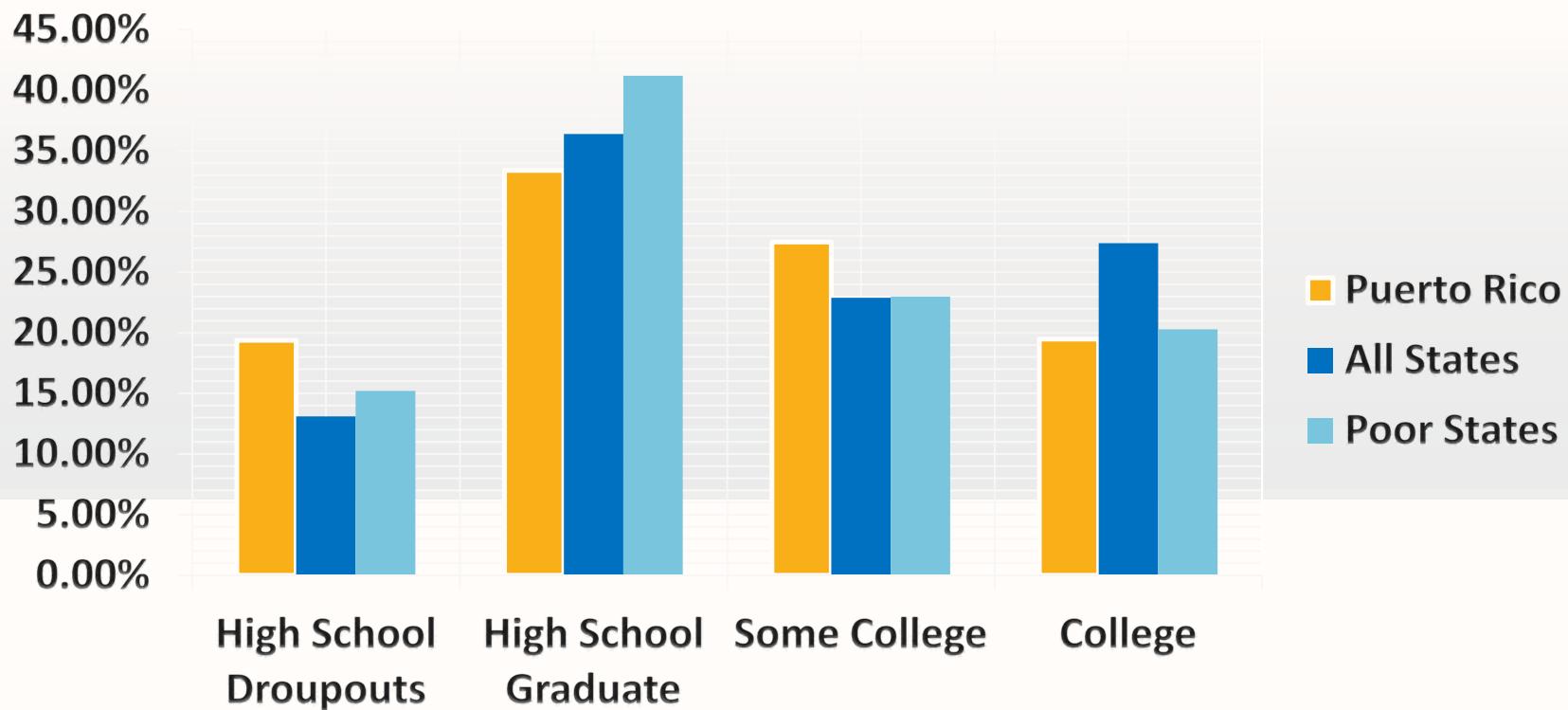
THE STATE OF PLAY IN PUERTO RICO...



**AS MEASURED BY YEARS
OF SCHOOLING THE
SITUATION SEEMS
REASONABLE...**

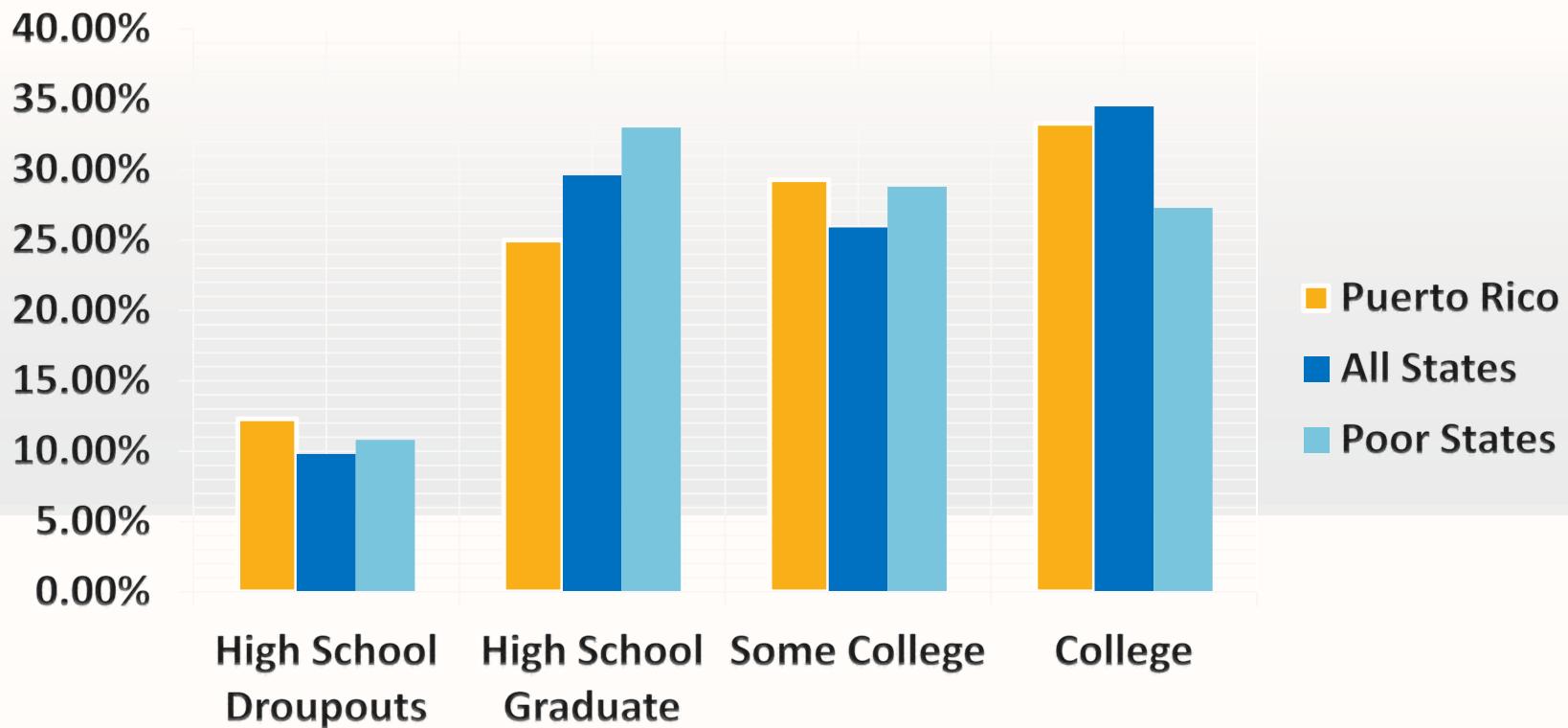


EDUCATIONAL ATTAINMENT, MEN, AGES 25-34



Source: ACS. Five Year Files

EDUCATIONAL ATTAINMENT, WOMEN, AGES 25-34

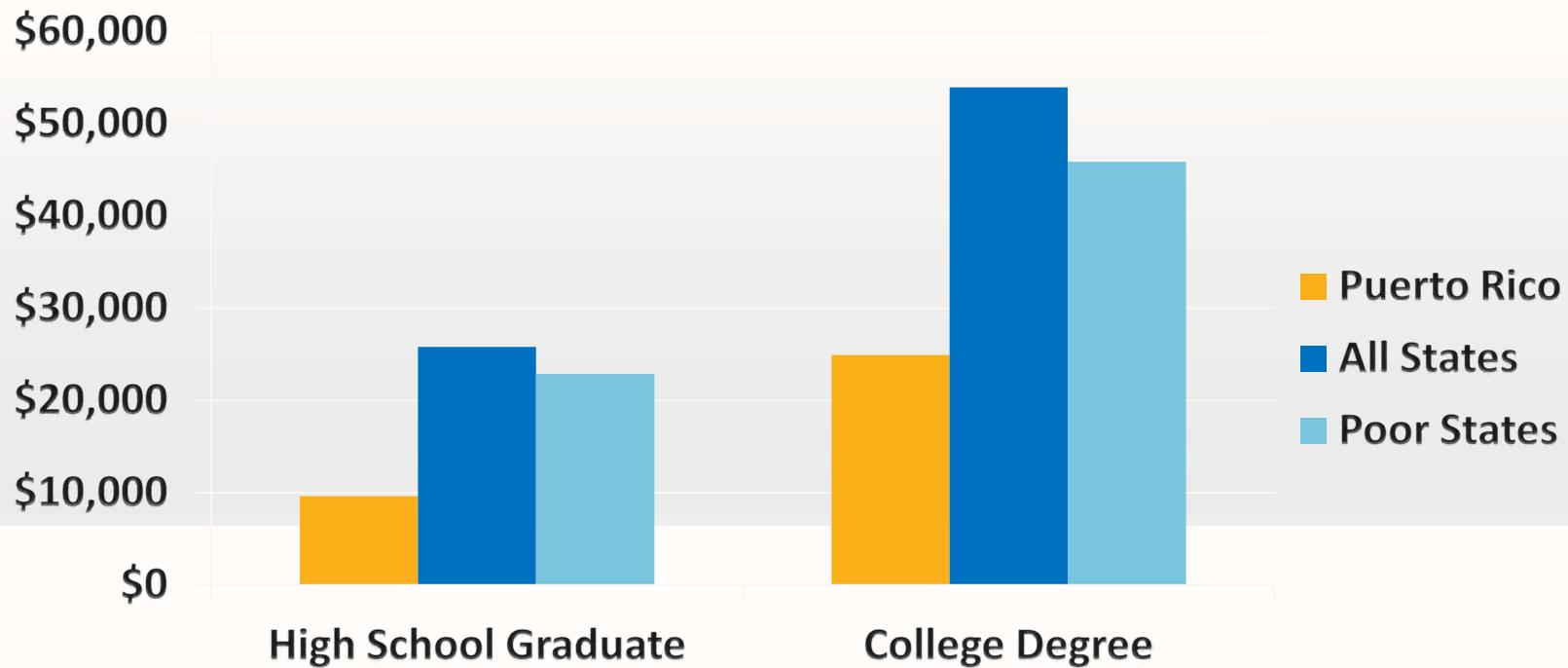


Source: ACS. Five Year Files

**BUT EDUCATION DOES NOT
PAY OFF AS MUCH AS IT
SHOULD**

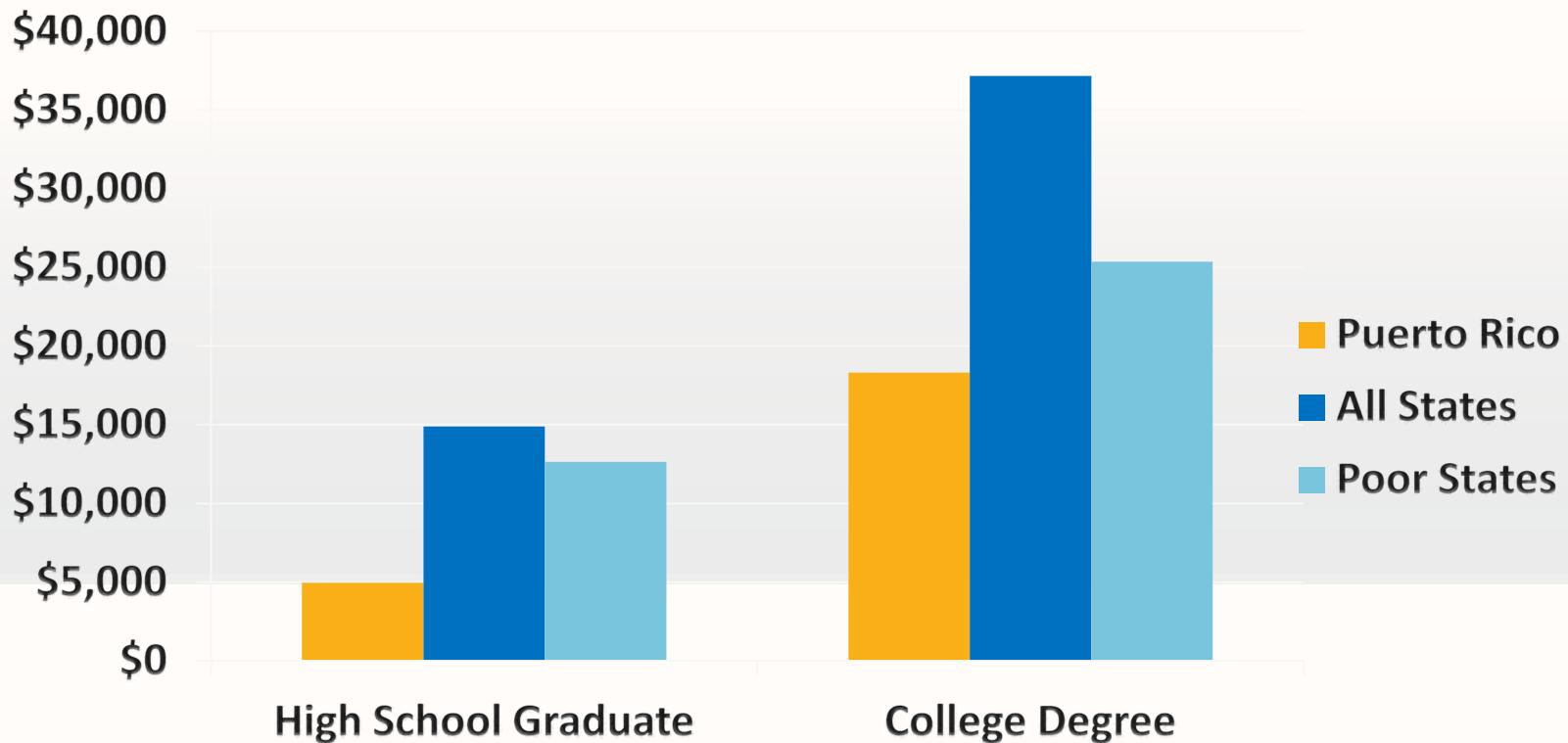


ANNUAL EARNINGS, MEN 25-34



Source: ACS Five Year Files

ANNUAL EARNINGS, WOMEN 25-34



Source: ACS Five Year Files

PART OF THE PROBLEM IS QUALITY



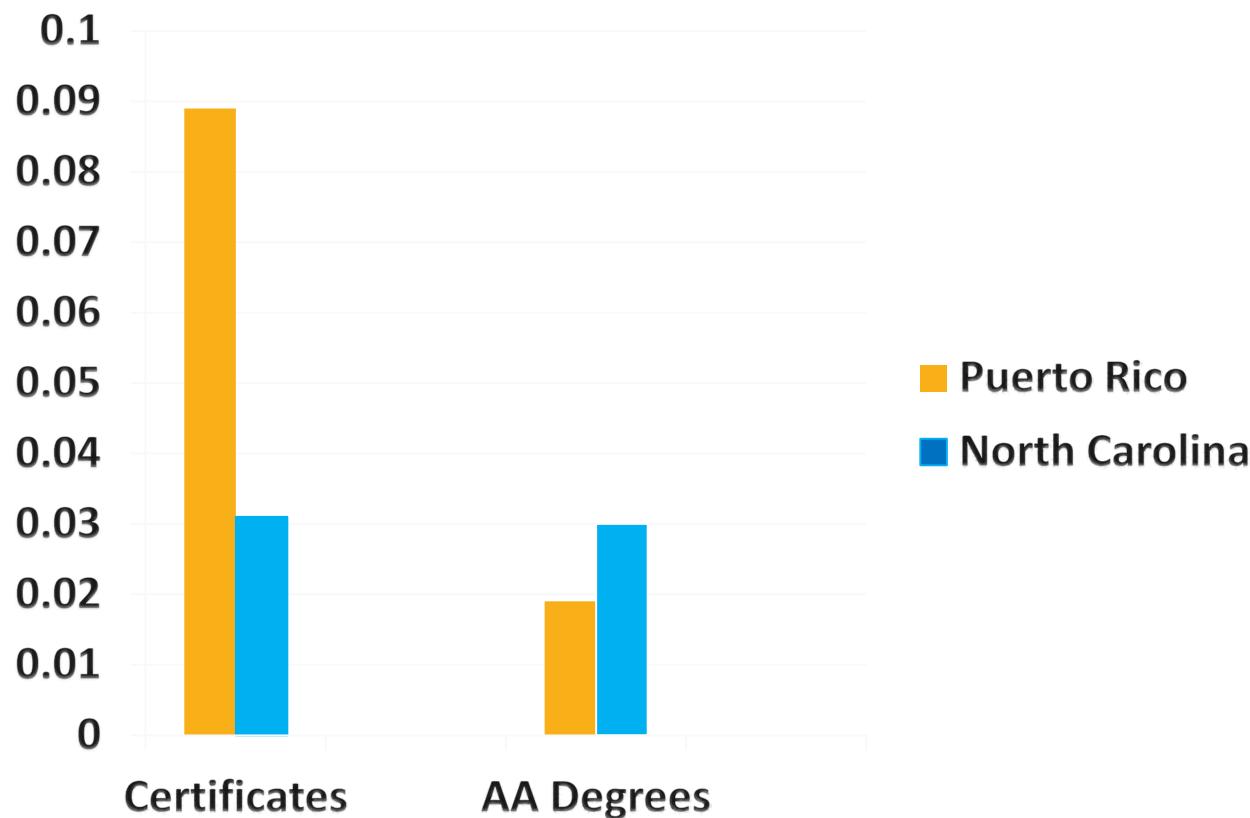
- Average Puerto Rican answer score for 8th grade math in the National Assessment of Educational Progress is half that for the U.S. States.



POST-SECONDARY JOB RELATED EDUCATION MAY BE OF CONCERN



SUB-BACCALAUREATE AWARDS (AS RATIO OF 25-30 YEAR OLDS)



Source: IPEDS 2009 Awards. Census for population data

A VISION FOR MOVING FOWARD

A HUMAN CAPITAL DEVELOPMENT STRATEGY FOR
PUERTO RICO



THE ELEMENTS OF THIS STRATEGY

- Build on existing strengths
- High quality education
- A strong link between skill training and the needs of employers
- An emphasis on young people AND adults

THE STRONG FOUNDATION

- High rates of school attendance
- Strong four year universities

Examples of quality: the Biogen Indec story

clusters and training in Mayaguez

ELEMENTS OF BEST PRACTICE

- Improving high school learning and graduation via links to firms and links to post-secondary education
- Middle skill post-secondary skill training
- Intermediaries that work with adults and firm
- Plus: Universities that support and grow the business community

EXAMPLES:

Early College High Schools

High School students take courses at community colleges

Teaching and course content is improved in order to make the connection to community colleges succeed

Dropout rates fall and college attendance rises

EXAMPLES:

Career Academies

School within a school

Curriculum oriented around a field such as IT or Media or Bio-Pharm

Students spend academic and summer time in firms

7,000 Career Academies, serve 1 million students

Randomized evaluation: eight years after graduation earnings higher for Career Academy students and at-risk youth especially benefit

COMMUNITY COLLEGES: KEY MIDDLE-SKILL INSTITUTIONS IN THE STATES

**43% of post-secondary enrollment, over 6 million
students for credit**

Another 6 million in non-credit courses

**Offer AA Degrees, Certificates, Transfers, customized
training for firms**

Majority in occupational programs

40% of students 25 years and older, mostly part-time

AN EXAMPLE: SPARTENBERG COMMUNITY COLLEGE, SOUTH CAROLINA

AA and certificates in a wide range of occupational fields

Non-credit continuing education in manufacturing skills

Customized training division. Example: quality standards training

Partner with the Manufacturing Extension Program

Partner with economic development agencies to attract new firms

Small business incubator

INTERMEDIARIES: A FOCUS ON ADULTS

Dual customer focus: firms and trainees

Develop industry expertise

Funded by public monies, foundations, firms, unions

Offer training, support services, assistance to firms

A strong network has emerged along with technical assistance and evaluation organizations



AN EXAMPLE: PROJECT QUEST, SAN ANTONIO, TEXAS

Works with local firms to identify openings

Enrolls students in community colleges

Offers accelerated remediation to prepare for credit courses

Strong support including weekly meetings with staff

Training is long term, a year or more

Very substantial wage gains

WEAVING IT ALL TOGETHER



A commitment to human capital as a core growth strategy

A strong linkage between education and training institutions, economic development strategies, and firms

A public-private partnership. BOTH sides are needed to make this happen. Government must be a constructive player and employers must make a commitment to push for and to lead change.

PUERTO RICO IS WELL POSITIONED TO ACHIEVE THIS

High rates of school attendance

Strong four year universities

Many leaders, public and private, with a strong commitment to progress

....the next step is to think systematically to build a coherent plan for moving ahead

...my experience here—the many people with whom I have talked—leave me confident that you can succeed.



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THANK YOU!
¡UOY KINAH!