The link between the business world and Technical Education

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FACTS & NUMBERS

- **About 30% of the future jobs do not exist YET,**
- **By 2025, we'll lose over FIVE MILLION JOBS to automation,**
- **Even highly qualified graduates are now finding it difficult to get a job,**
- **Different reasons for unemployment such as:**
  - Increased supply of **Unqualified Grads**
  - Weak infrastructure for **innovation and entrepreneurship**
  - Education-occupation **mismatch**
  - **Lack of entrepreneurship**

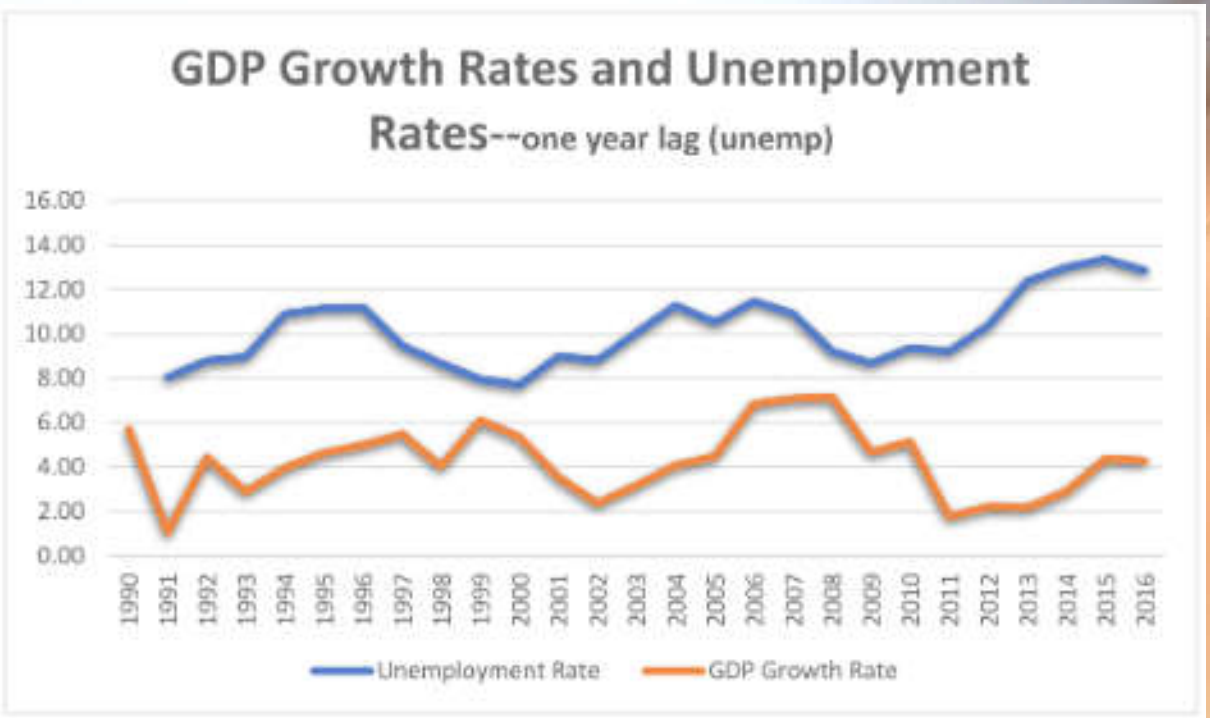
[*"Educated but Unemployed: The Challenge Facing Egypt's Youth," Brookings Institute , Massachusetts, USA, 2017****]***

FACTS & NUMBERS

- A high percentage of graduates have specialties that are not in demand in the labor market,
- University graduates miss skills needed to work in their chosen field,
- The Market necessity of up to date courses and trainings,

Education and Unemployment

- Despite reasonably good economic growth in the last few years, the unemployment rate in Egypt has been record levels since 1990.



GDP and unemployment

Source: IMF; World Economic Outlook Database, April 2017; World Development Indicators (WDI)

Education and Unemployment

- A closer look at unemployment rate shows a negative relationship between unemployment rates and educational attainment. College graduates record the highest share of unemployme

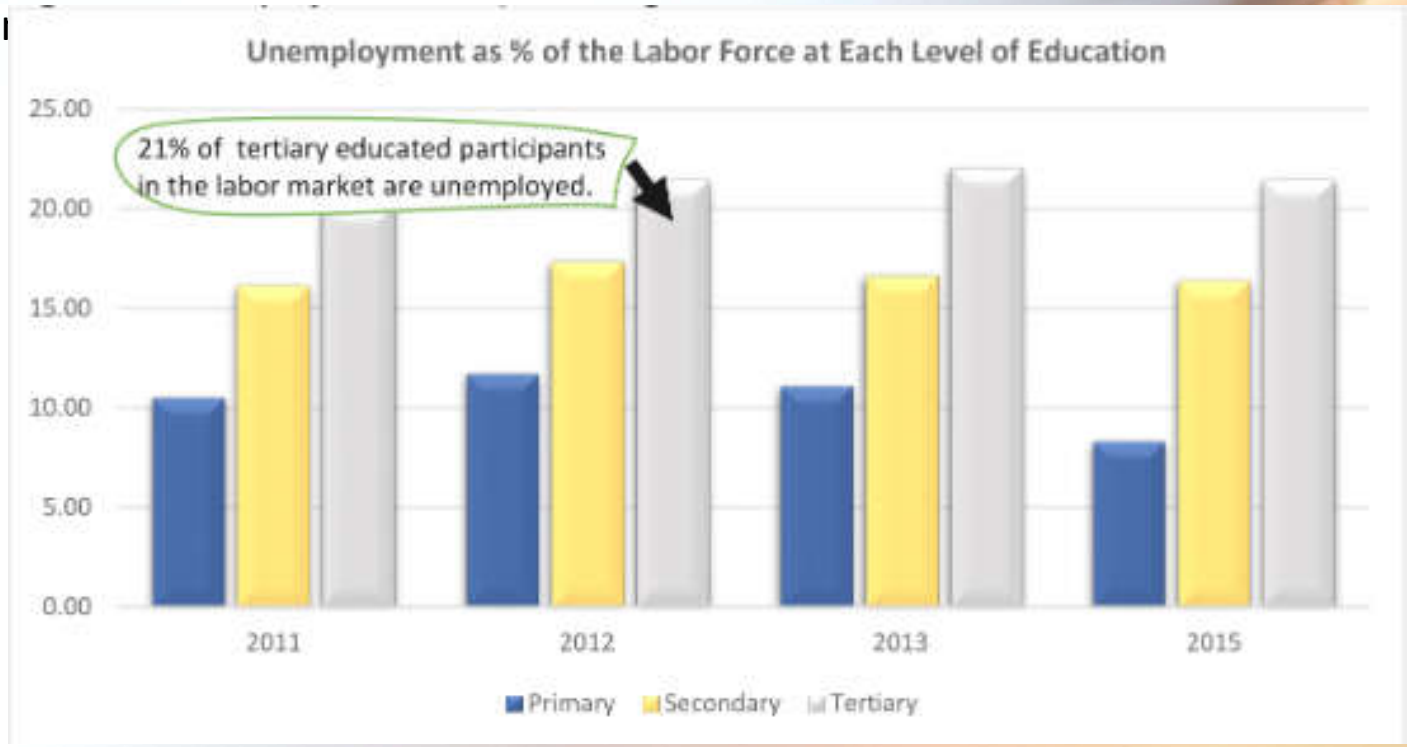


Figure 3: Unemployment as a percentage of the labour force at each level of education

Source: WDI.

The relevant economic theory

The linkage between education level and employment is one of the most debatable topics in the study of labour economics. Since education is the means of providing a skilled workforce, it is necessary for the overall development of the economy.

Considerable empirical and theoretical literature attempts to establish the relationship between the level of education and subsequent employment or earnings. Several studies, in different economies have found evidence that education provides positive future returns, i.e., on an average additional education results in additional earnings in the labour markets *(Chevalier et al., 2004; Blundell et al., 2005; Robinson & Sexton, 1994; Harvey, 2000).*

There are two competing economic theories to explain the empirically observed relationship, namely, **The Human Capital theory** and **The Signalling theory**.

The relevant economic theory

The Human Capital theory argues that education imparts skills that serve to increases the productivity of an individual. The more productive individuals are able to generate a higher output which naturally translates into higher wages and better employment opportunities.

In contrast**, the Signalling theory** argues that education does not enhance human capital in anyway, instead it merely reflects the existing human capital. Therefore, according to the Signalling theory the potential employees would opt to send signal about their ability level by acquiring better educational credentials. While the education by itself may not enhance the productivity or skill of an individual.

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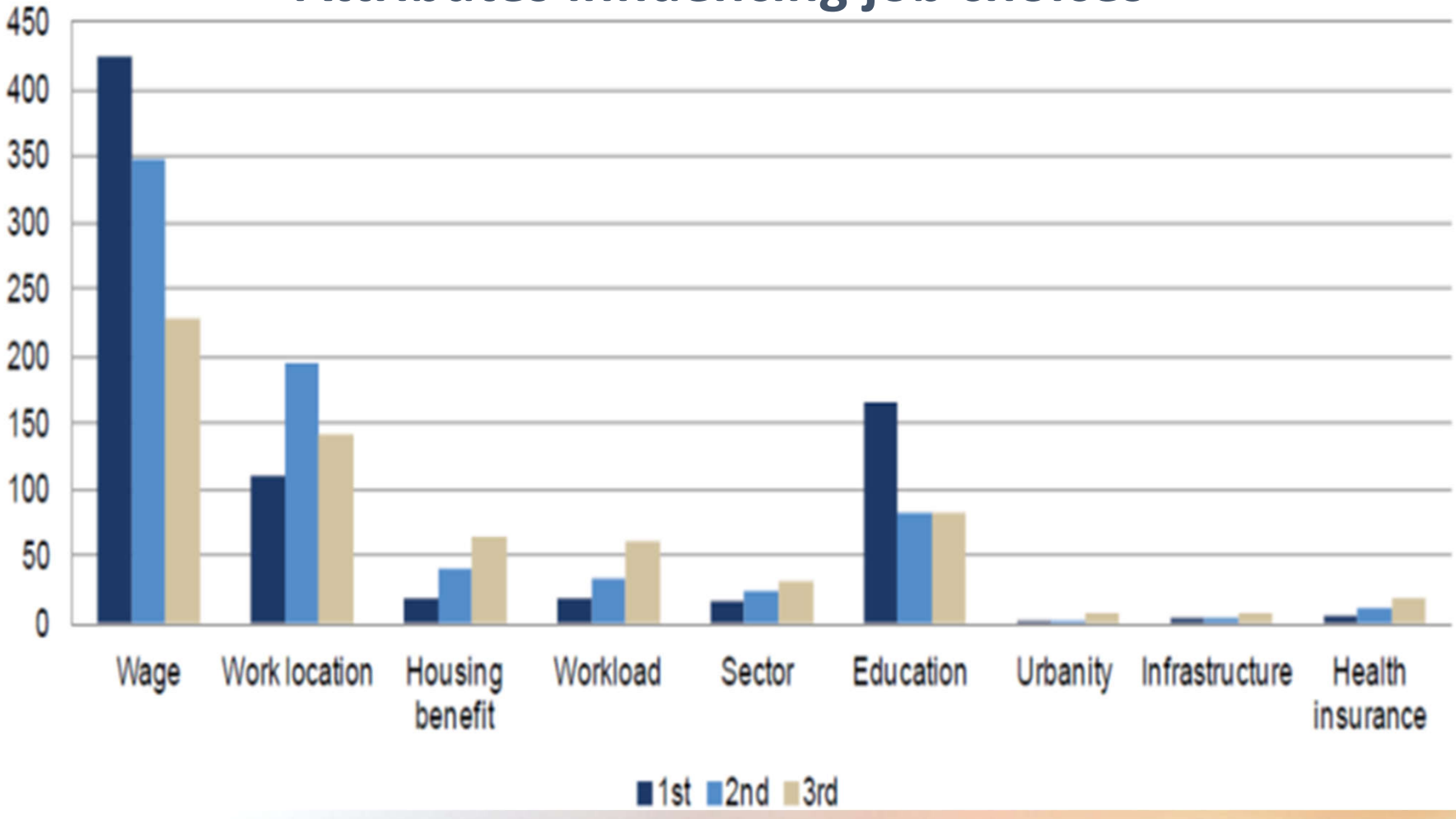
Attributes influencing job choices



FUTURE REQUIREMENTS

TECHNOLOGICAL CHANGE
- Perennial fears about impact of automation on employment.
- Estimates of future automation impact range, from 47 percent of U.S. employment at risk to only 9 percent.
- Conversely, technology amplifies human performance in some occupations—and gives rise to entirely new occupations and sectors.

GLOBALIZATION
- Global labor markets increasingly integrated.
- Benefits (e.g.,advanced manufacturing, knowledge-intensive services) and costs (e.g., employment and wage impacts, trade deficits, legacy manufacturing).
- Post-financial crisis headwinds (e.g., sluggish world trade growth, rising protectionism).

DEMOGRAPHIC CHANGE
- Pressures to control age-related entitlements vs. investments in education, R&D, infrastructure.
- Ripple effects through health care, finance, housing, education, recreation.
- Rising Millennial generation, with divergent consumption and work behaviors.

ENVIRONMENTAL SUSTAINABILITY
- Climate change consensus largely intact, but with notable cracks.
- Structural changes resulting from emerging "green economy sector" and "green jobs" vulnerable to political reversals.

URBANIZATION
- More than half of world population lives in cities—70 percent by 2050. Cities attract high-value, knowledge-intensive industries; offer more varied employment and consumption opportunities.
- Uncertainties include fiscal policy, infrastructure investments, high public debt ratios.

INCREASING INEQUALITY
- Rise in income and wealth inequality, middle class squeeze.
- Disparities in education, health care, social services, consumption.

POLITICAL UNCERTAINTY
- Indices of geopolitical uncertainty have remained high since 9/11 spike.
- Mirrored by political and policy uncertainty—capacity of institutions and policymakers to act credibly and consistently.
- Uncertainty negatively affects economic activity in government-influenced sectors, such as defense, finance, construction, engineering, and health care.

FUTURE SKILLS

1. **Mental Elasticity and Complex Problem Solving,**
2. **Critical Thinking,**
3. **Creativity,**
4. **People Skills,**
5. **STEM,**
6. **SMAC (**(social, mobile, analytics and cloud)
7. **Interdisciplinary Knowledge**

Jobs of the Future

future jobs will involve knowledge creation and innovation. Machines are nearly doing everything,

1. **Trash specialist** (2.6 billion pounds of trash)

2. **Alternative Energy Consultant**

3. **Earthquake Forecaster**

4. **Medical Mentor**

5. **Organ/Body Part Creator (**the organ black market**)**

Jobs of the Future

6. **Memory Surgeon** (Remove bad memories)

7. **Personal Productivity Person**

8. **Personal Internet of Things (IoT) Security Repair Person**

9. **Flight Instructor**

10. **Commercial Space Pilot**

Emerging TE & Entrepreneurship Skills

From analyzing the technical education and business world, three main axes are vital needed to improve the employability, as:

- ✓ The demand for graduates with proper skills (Employability skills),
- ✓ The willingness of students and trainees to enroll in programs; and
- ✓ The qualitative and quantitative relevance to actual labor market needs (**Competitiveness and Attractiveness**).

To Strength the link

• **Develop an awareness** of the Business world, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions,

• Understand and demonstrate **how academic content is applied in real-**world and workplace settings.

• Provide students with the necessary **educational experiences** to enable them to make better career choices, preparing them for the business world,

• Demonstrate the foundation **skills and competencies** essential for success in the workplace and advanced college based studies.

To Strength the link

- **Motivate students to develop their business creation projects**

  There is a need to an **internal structures for information and business support** for the young people and the difficulties in the orientation and following of the young people towards these same organizations do not support the development of entrepreneurial motivations and intentions for young people.

To Strength the link

- **Revise the governance system for business support programs**

  The concerned governmental bodies should cooperate to improve business support offerings. Many organizations support VET students in setting up a business, notably by the Business Centers, the *pioneers*, employment offices and the *spaces entreprenerd,* but their offering are **provided in isolation**.

- So, there is a need to make an efficient support system more cohesive to build "**win-win" partnerships** with other stakeholders.

Now, we will go ahead with EG interventions addressing some these problems