



United Nations  
Educational, Scientific and  
Cultural Organization

# Workshop: Can we use Big Data for Skills Anticipation and Matching?

September 20, 2019

**Session: Usage of big data for emerging and developing economies**

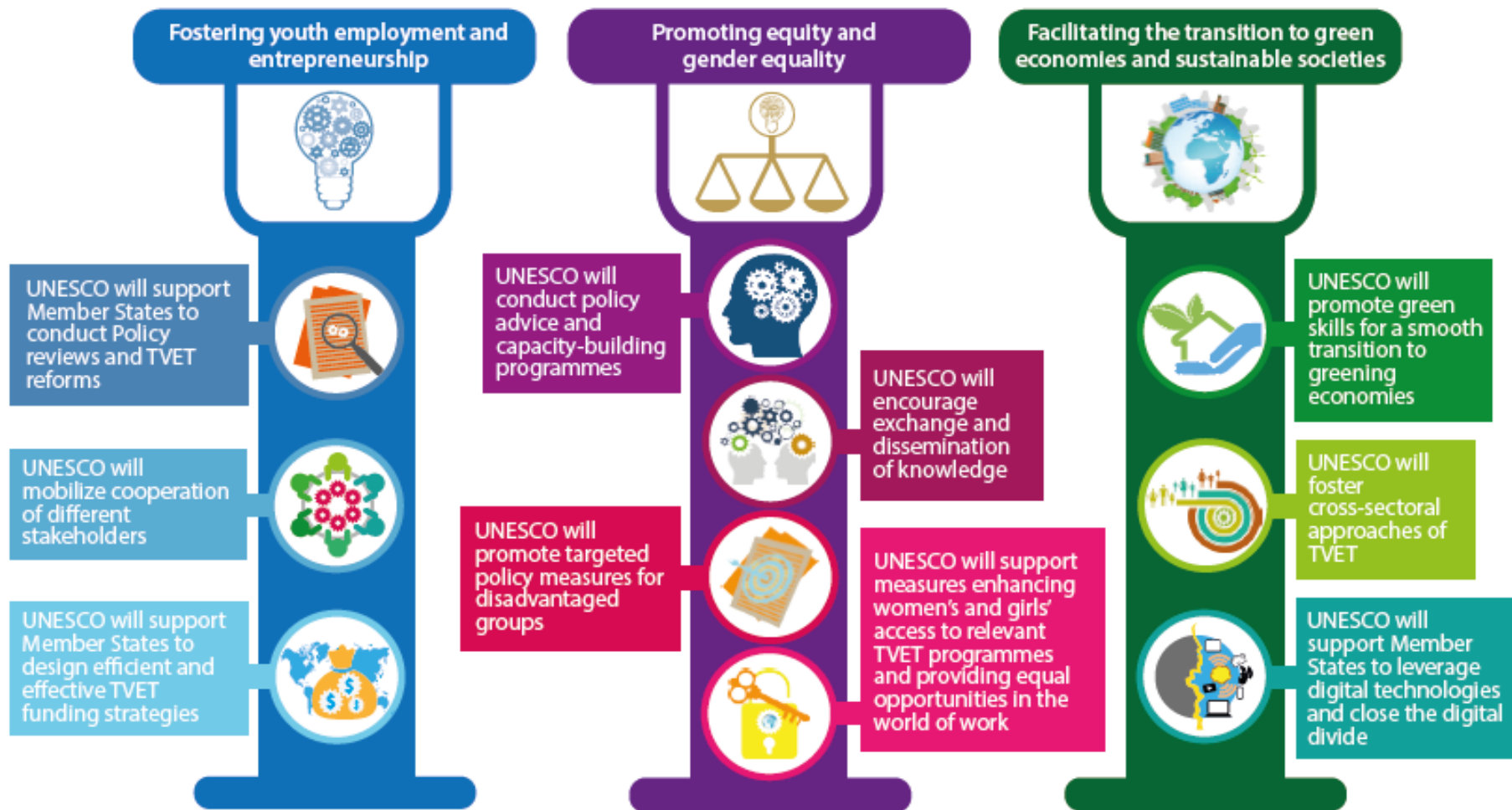
## Using real-time big data for TVET policies and strategies: Case of Myanmar

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Section of Youth, Literacy and Skills Development  
UNESCO (Paris)



**Education & Skills are the central to the realization of the 2030 Agenda for Sustainable Development**





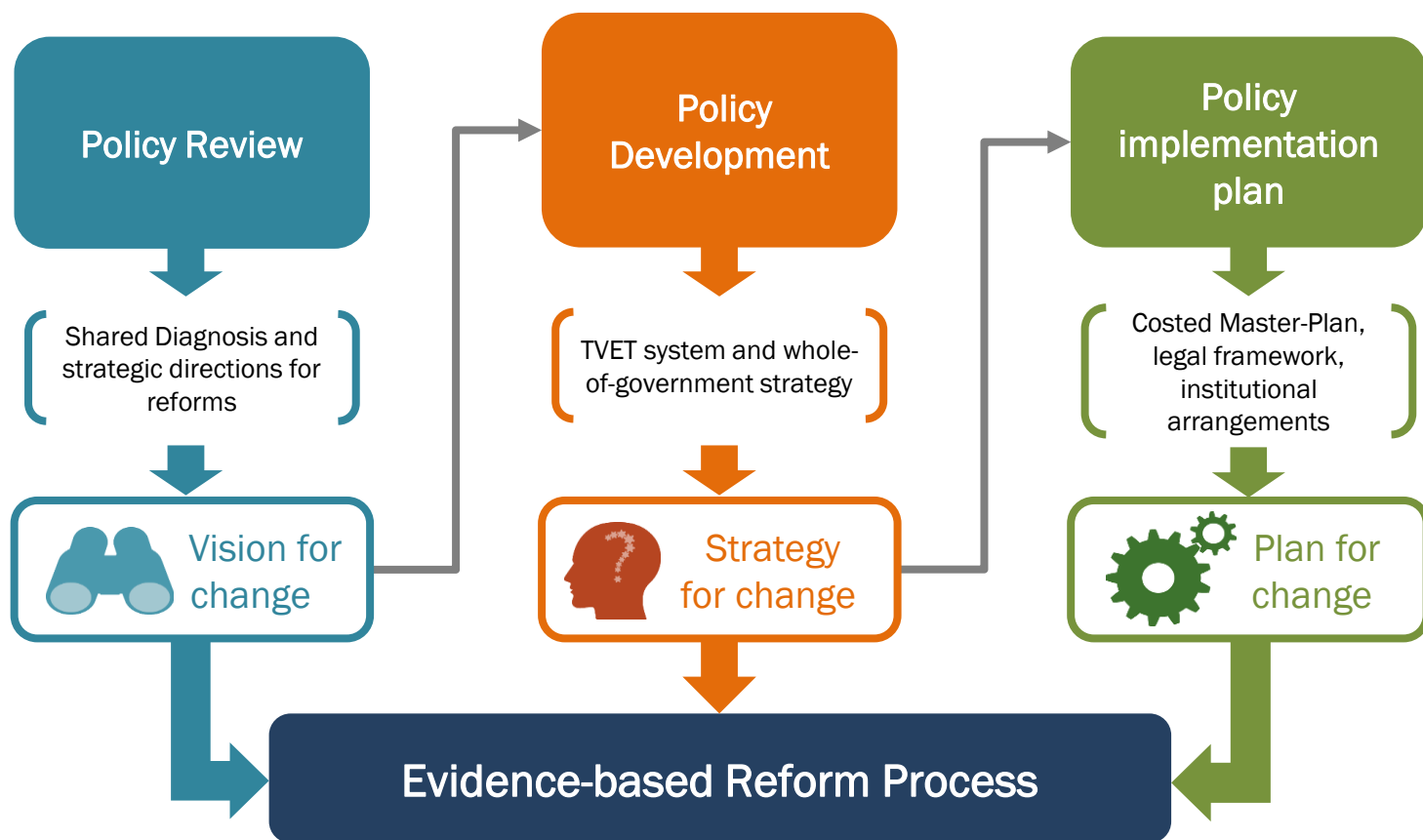
**Support Member States Navigate the Future of Work**



**Support Data-Driven Policy and Programs**



**Peer Learning and Networking**



## Data integration

**Different providers/awarding bodies**

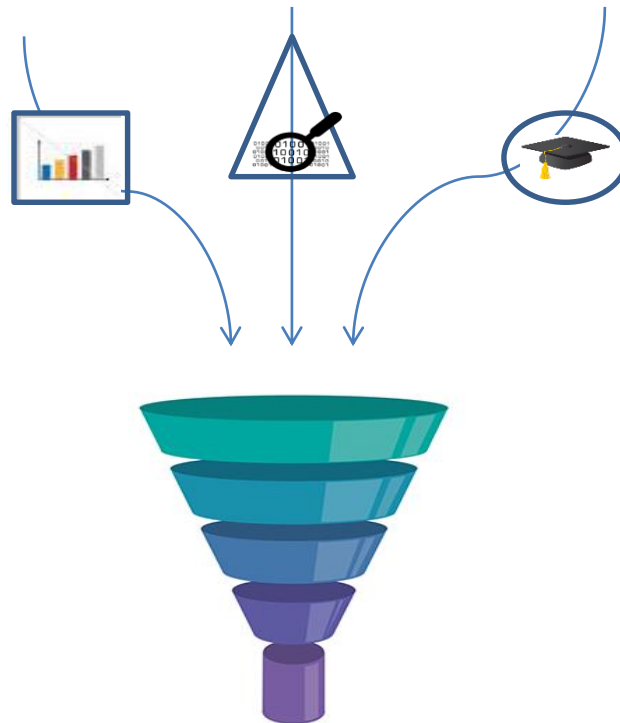
**Different data**

**Needs to be streamlined and fine-tuned for processing and analysis**

**Labor ministry**

**Private sector**

**Education ministry**



## Governance

No clear governance lines, that link and coordinate all the involved actors, target groups and processes.

## Data use

The results are not “translated” for and disseminated to target groups in a systematic way.

## Data comparability

The results are not “translated” for and disseminated to target groups in a systematic way.

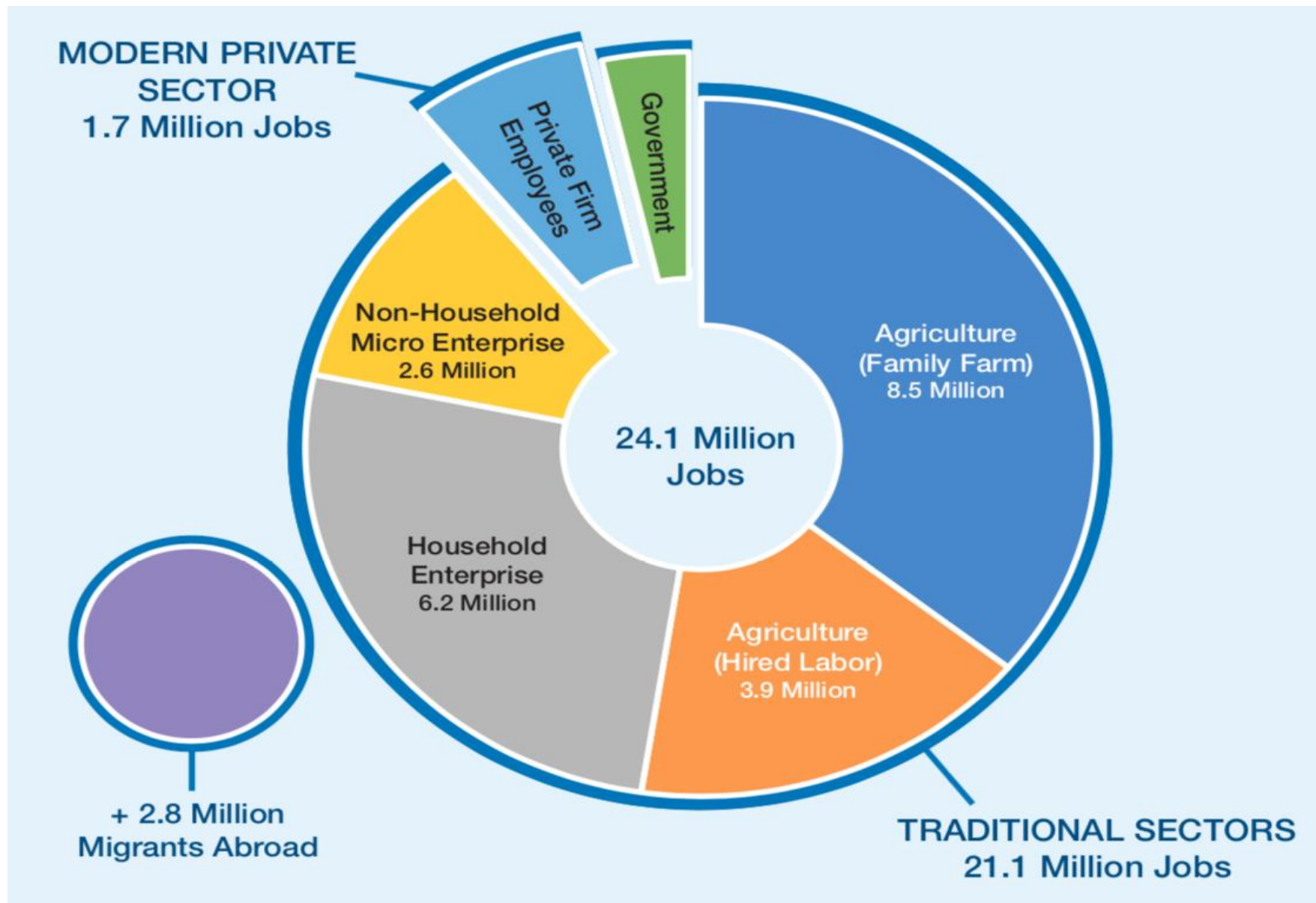
# Example: Myanmar TVET System Review

- Findings from traditional labor market information
- Findings from real-time big data

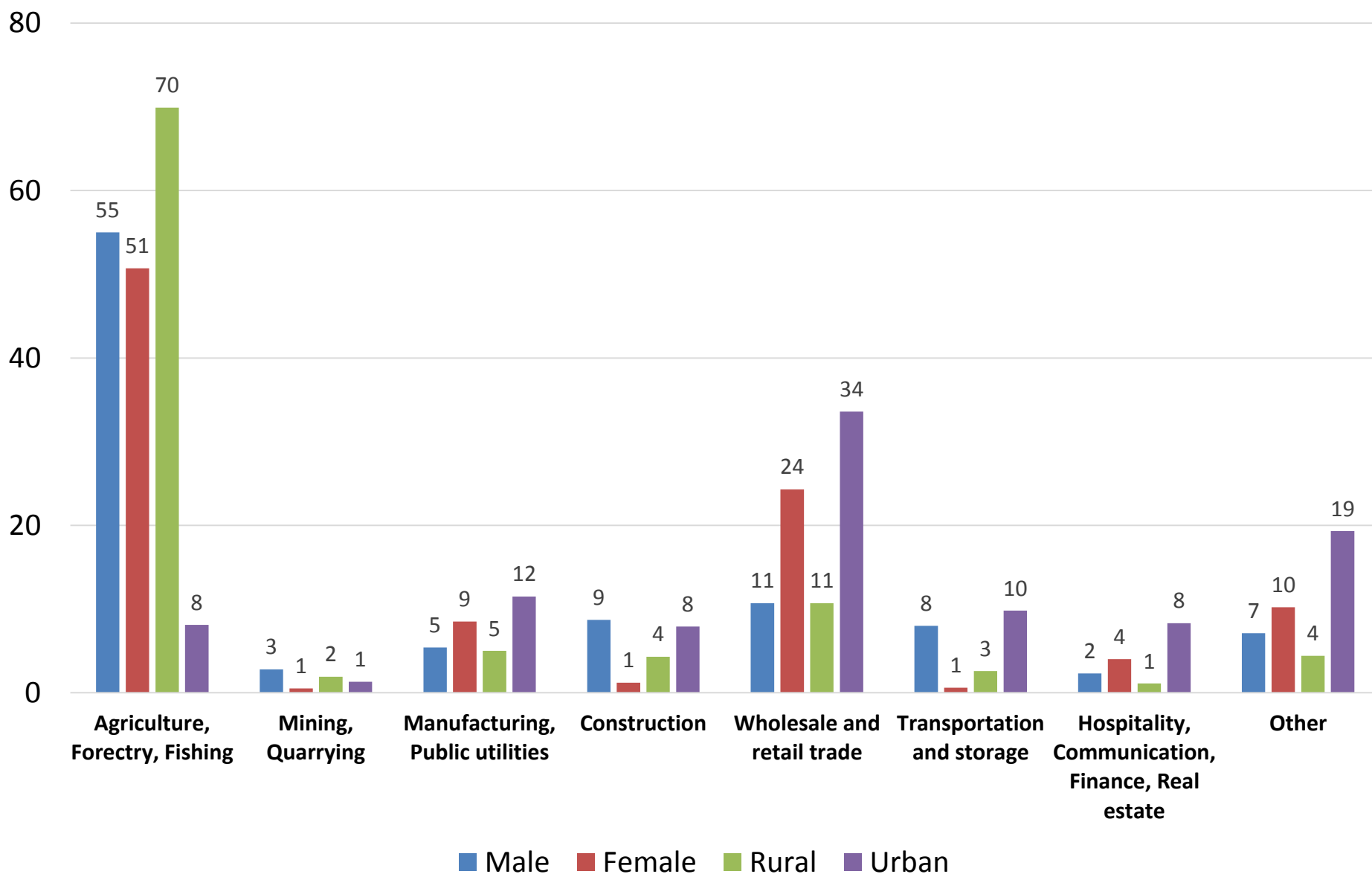


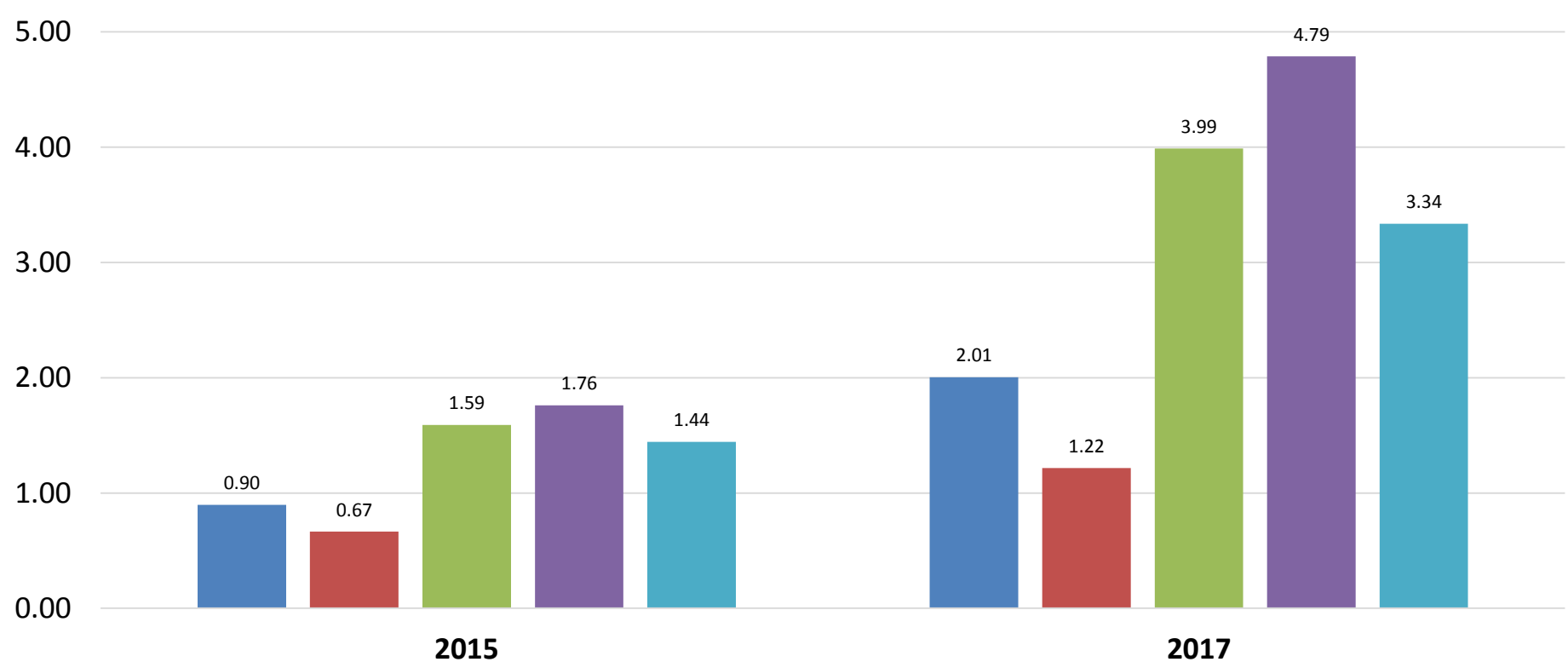


# Myanmar: Jobs picture (Labor force survey)

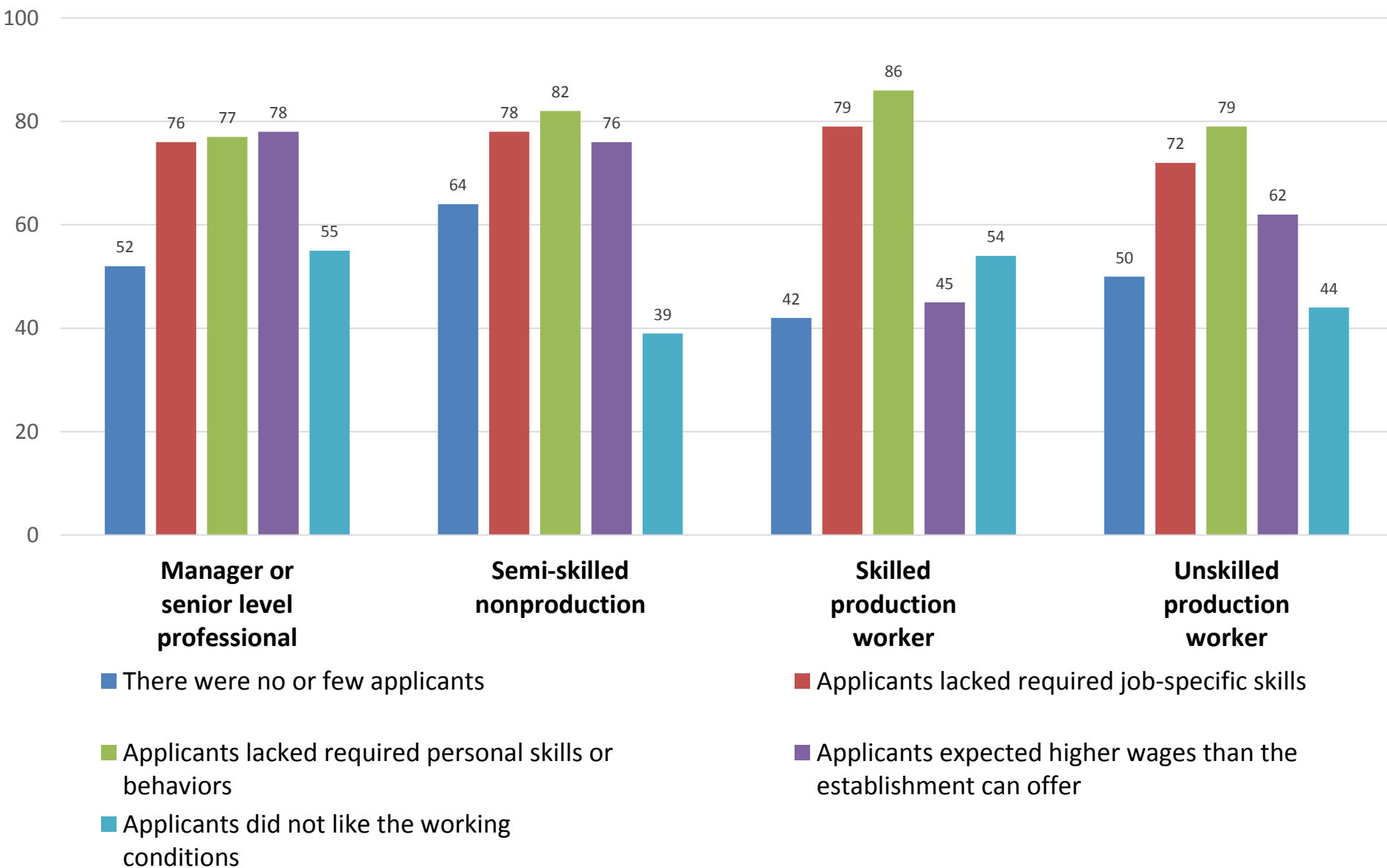








- Unemployment, female (% of female labor force) (national estimate)
- Unemployment, male (% of male labor force) (national estimate)
- Unemployment, youth total (% of total labor force ages 15-24) (national estimate)
- Unemployment, youth female (% of female labor force ages 15-24) (national estimate)
- Unemployment, youth male (% of male labor force ages 15-24) (national estimate)



## Investment in major infrastructure and industrial development

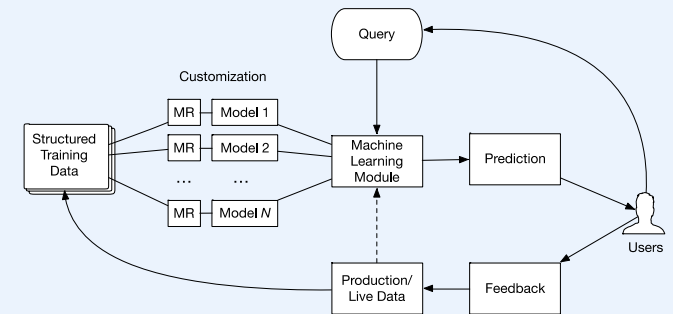
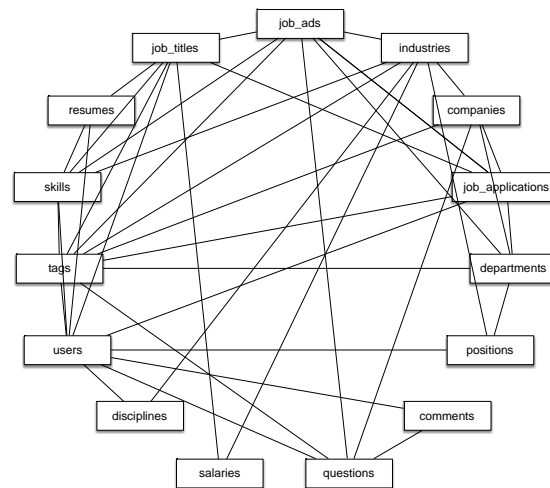
- 4 seaports
- 2 airports
- Upgraded railways
- New city development (Yangon and Mandalay)
- Integrated refinery and petrochemical complex
- New cement factories
- Industrial waste water projects
- 5 new power generation projects (solar, hydro and wind)

(Source: Directorate of Investment and Company Administration)

# Myanmar: Fragmented training providers



## Approach: Big data analytics and artificial intelligence (AI)



**Data Mining**  
Indexing data from multiple sources

**Statistical Analysis**  
Data cleaning and relational extraction

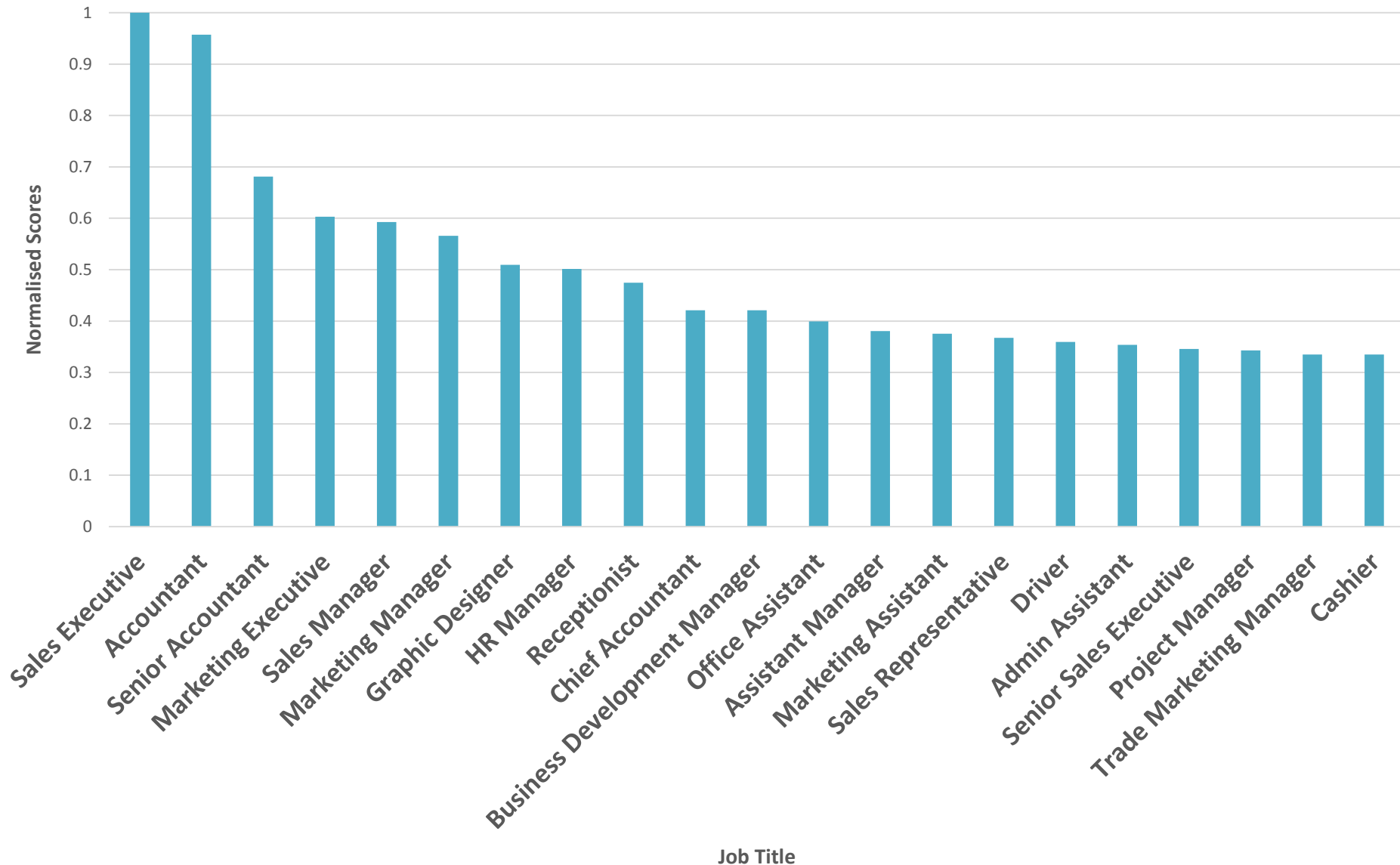
**Predictive Modelling**  
Customized model based on required context

Source: JobKred

- Over 20,000 data points from *JobNet.com.mm* were cleaned up, with the job titles mapped to appropriate ones within JobKred's taxonomy.
- An initial analysis was then done using the mapped job titles to understand employer demand in the labor market, with frequency of the job titles as the indicator.
- Subsequently, the job descriptions were processed by JobKred's predictive engine to identify and discern skills relevant to the respective job titles. The employer demand for the skills were once again calculated using frequency of occurrence as the indicator.
- A preliminary analysis was done with the data obtained from the above.

Source: JobKred





## Top Skills in Sales/Business Development

# #1

Job Function by Demand

### Top 10 Skills for Sales Executive

01	Sales
02	Identifying New Business Opportunities
03	Customer Service
04	Manage Client Relationships
05	Retaining Customers
06	Long-term Customer Relationships
07	Sales and Marketing
08	Introducing New Products
09	Sales Plan
10	Listening to Customers

### Top 10 Skills for Sales Manager

01	Sales
02	Sales and Marketing
03	Sales Management
04	Sales Plan
05	Manage Client Relationships
06	Sales Operations
07	Customer Service
08	Identifying New Business Opportunities
09	Retaining Customers
10	Sales Growth

### Top 10 Skills for Business Development Manager

01	Identifying New Business Opportunities
02	New Business Development
03	Manage Client Relationships
04	Business
05	Business Development
06	Sales
07	Helping Clients Succeed
08	Introducing New Products
09	Building Relationships
10	Client Services

JobKred

## Sales/Business Development

# #1

Job Function by Demand

### Top 10 Skills by Demand

01	Sales
02	Sales and Marketing
03	Identifying New Business Opportunities
04	Customer Service
05	Manage Client Relationships
06	Retaining Customers
07	Sales Plan
08	Sales Operations
09	Sales Management
10	Target Marketing

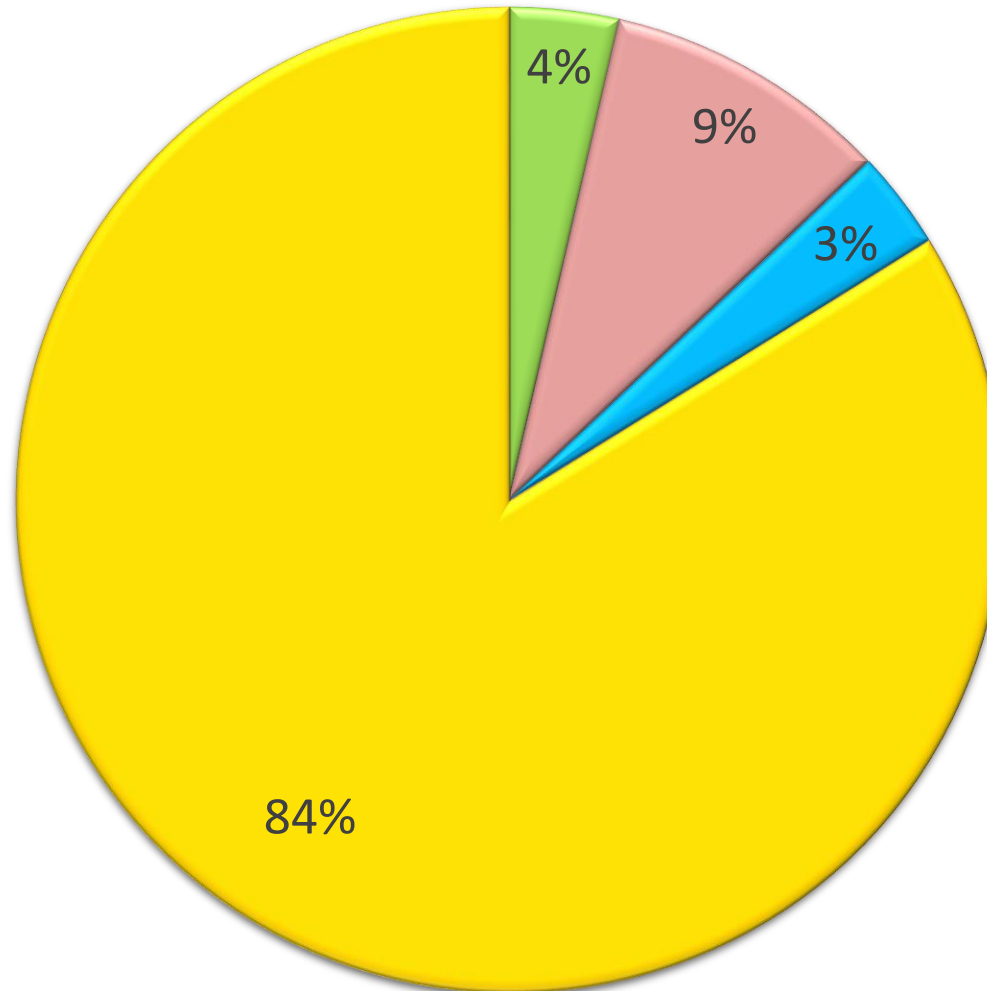
### Top 10 Job Titles by Demand

01	Sales Executive
02	Sales Manager
03	Business Development Manager
04	Sales Representative
05	Senior Sales Executive
06	Sales Supervisor
07	Business Development Executive
08	Area Sales Manager
09	Trade Marketing Manager
10	Sales Engineer

- to be analysed in greater detail

JobKred

## Work Experience Requirement in Myanmar



■ Intern Only ■ Fresh Grad Only ■ Both Intern and Fresh Grad ■ Experienced Only

- 1. Identification of proper on-line job boards / Reliability**
- 2. Coverage of data**  
(white/blue collar jobs, formal/informal employment, etc.)
- 3. Data cleaning**  
(double counting, missing values, reporting periods, etc.)
- 4. Taxonomy** (classifications, nomenclature, etc.)
- 5. Complementarity with other labor market information**  
(establishment of a holistic and integrated skills governance)

**Administrative Data**

**Survey Data**

**International Surveys  
Data**

**Skills assessment**

**Skills foresight**

**Skills forecasting**

**Tracer studies**

**Longitudinal studies**

**Opinions studies**




**CENTRAL REPOSITORIES**



**EXCHANGE NETWORKS**

## ***Completed policy review and planning policy development support:***

- Malawi  myJobo.com
- Namibia
- Uzbekistan
- Zimbabwe

## ***Finalizing, ongoing or planned policy review in 2019-2020:***

- Armenia
- Eswatini
- Grenada
- Mongolia
- Myanmar
- Sri Lanka
- Tajikistan



## ***Capacity development: Skills anticipation***

- Israel  AllJobs
- Jordan
- Lebanon
- Morocco
- Palestine
- Tunisia





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# Thank you

for further information

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