

Annexes A & B

Annex A

- Measuring Instrument: Migrant and Entrepreneurial Dimensions in the Face of Nearshoring at the Public University
- Objective: To evaluate the perceptions, experiences and attitudes of the university community in relation to the opportunities and challenges offered by nearshoring from a migration and entrepreneurial perspective.
- Target Population: Students, professors, researchers and administrative staff of the university.
- Format: Self-administered questionnaire (can be in digital or printed format).

Section 1: Demographic and Identification Data

- Age
- Sex
- Study program or area of work
- Level of education or position
- Nationality / Place of residence
- Previous immigration experience (Yes/No): If the answer is “Yes”, specify country and duration.

Section 2: Migratory Dimension versus Nearshoring

Key Indicators: Expectations, Motivation and Adaptation

Mobility Expectations: Would you consider migrating to work or do an internship at a company involved in nearshoring ? (Likert scale: 1=Not at all likely, 5=Very likely)

Experience in Multicultural Interaction: In your academic/work life, how frequently do you interact with people of different nationalities or cultures? (Likert scale: 1=Never, 5=Very frequently)

Nearshoring Migration: How much do you agree with the statement: “Migration and cultural diversity benefit the development of skills necessary for nearshoring ” ? (Likert scale: 1=Totally disagree, 5=Totally agree)

Adaptation to New Work Environments: How prepared do you feel to adapt to an international or diverse work environment, typical of nearshoring companies ? (Likert scale: 1=Not at all prepared, 5=Very prepared)

Section 3: Entrepreneurial Dimension versus Nearshoring

Key Indicators: Attitude towards Entrepreneurship, Resources and Institutional Support

Attitude towards Entrepreneurship: Are you interested in starting your own business in a sector related to nearshoring (logistics, technology, manufacturing, etc.)? (Likert scale: 1=Not at all interested, 5=Very interested)

Perception of Nearshoring Opportunities in the University Environment: How much do you agree with the statement: “The university fosters opportunities for entrepreneurship in sectors relevant to nearshoring ” ? (Likert scale: 1=Totally disagree, 5=Totally agree)

Access to Entrepreneurship Resources: Are you aware of the resources that the university offers to support entrepreneurial projects (e.g. incubators, financing)? (Options: Yes/No)

Training in Entrepreneurial Skills: Do you think you have received sufficient training in entrepreneurial skills (finance, management, networking) during your time at university? (Likert scale: 1=Totally disagree, 5=Totally agree)

Section 4: Nearshoring and its Impact on Professional Future

Nearshoring Appeal: How attractive do you consider nearshoring for your professional career development? (Likert scale: 1=Not at all attractive, 5=Very attractive)

Key Competencies and Skills for Nearshoring: How prepared do you feel with the skills and competencies required to work in an industry related to nearshoring ? (Likert scale: 1=Not at all prepared, 5=Very prepared)

Role of the University in Preparing for Nearshoring: Do you think that the university offers adequate support to prepare for nearshoring issues ? (Likert scale: 1=Totally disagree, 5=Totally agree)

Nearshoring Companies: Would you be interested in doing internships or working for companies involved in nearshoring ? (Likert scale: 1=Not at all interested, 5=Very interested)

Response Scale: Most questions use a 5-point Likert scale, where:

1 = Strongly disagree / Not at all interested

2 = Disagree / Not very interested

3 = Neutral

4 = Agree / Interested

5 = Totally agree / Very interested

Analysis of Results

- 1) Migratory Dimension: Identify the openness to mobility and cultural adaptation, crucial for internationalized jobs in nearshoring.
- 2) Entrepreneurial Dimension: Evaluate the interest and preparation to undertake in sectors linked to nearshoring, as well as access to university resources.
- 3) Nearshoring Perspective: Measure the level of knowledge and preparation of the university community to face job opportunities in the context of nearshoring .

Annex B

Step 1: Install Required Libraries

```
!pip install pandas pyreadstat factor_analyzer statsmodels matplotlib scipy
```

Step 2: Import the Libraries and Load the File

```
import pandas as pd

from factor_analyzer import FactorAnalyzer

from statsmodels.multivariate .factor import Factor

import matplotlib.pyplot as plt

import scipy.stats as stats

Load the . ods file

file_path = '/mnt /data/TJHG AFC Entrepreneurship.ods '

data = pd.read _excel ( file_path , engine=" odf ")
```

Step 3: Explore and Preprocess the Data

Look at the first rows of the dataset to identify relevant columns

```
data.head ()
```

Remove unnecessary rows or columns or those with missing values if necessary

For example, `data = data.dropna ()` or `data = data.drop ([ ' NotNecessaryColumns '], axis=1)`

Step 4: Confirmatory Factor Analysis

Define the number of factors expected according to your model

```
num_factors = 3 # Change the number of factors according to the theoretical model
```

Perform exploratory factor analysis to determine the suitability of the CFA

```
fa = FactorAnalyzer ( n_factors = num_factors , rotation='varimax')
```

```
fa.fit (data)
```

Optional: Extract and display the factor loadings of each variable on each factor

```
print( pd.DataFrame ( fa.loadings _, index= data.columns ))
```

Step 5: Evaluating the Fit Model for the AFC

Calculate the KMO and Bartlett's test of sphericity from `factor_analyzer`: `factor_analyzer import calculate_kmo , calculate_bartlett_sphericity`

```
kmo_all , kmo_model = calculate_kmo (data)
```

```
print( "KMO: ", kmo_model )
```

```
chi_square_value , p_value = calculate_bartlett_sphericity (data)
```

```
print( "Bartlett's test chi-square: ", chi_square_value )
```

```
print( "p-value: ", p_value )
```

Step 6: Perform the CFA with Statsmodels

Define the correlation matrix and apply the AFC

```
model = Factor( data.values , n_factor = num_factors )
```

```
result = model.fit ()
```

Print the AFC results

```
print ( result.summary ())
```

Step 7: Visualizing the Factors

Make a screen plot to evaluate the variance explained by each factor

```
ev , v = fa.get_ eigenvalues ( )
```

```
plt.plot (range(1, len ( ev ) + 1), ev )
```

```
plt.xlabel ('Factors')
```

```
plt.ylabel ('Eigenvalue')
```

```
plt.title ("Sedimentation plot ( Scree Plot )")
```

```
plt.show ()
```

Step 8: Interpret the Results

Based on the results, interpret the factor loadings and model fit indices.

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