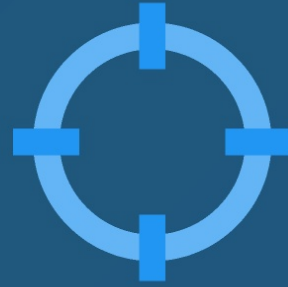BUAN 6356
Business Analytics with R
Project

Group 4

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Project Goal

Goal -Trends in Skill migration.

What attracted us to choose this topic ?

- Migration is a multidisciplinary venture, with a plethora of issues tied to it.
- Countries often enact policies in order to "cure" the roots of immigration by encouraging economic and social development.

About Data

The World Bank - Linkedin
UNDP - HDI Ranking data

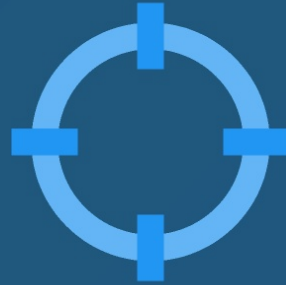| 2015 - 2019	140	86K +
Time Period	**Countries**	**Data Size**

Algorithm Used

Multi-Variate Linear Modeling

Skill_net_per_10k ~ HDI + Business skills + specialized industry skills + disruptive tech skills + Soft skills + healthcare industry + low income + upper middle income + lower middle income + Year(2016) + Year(2017) + Year(2018) + Year(2019)
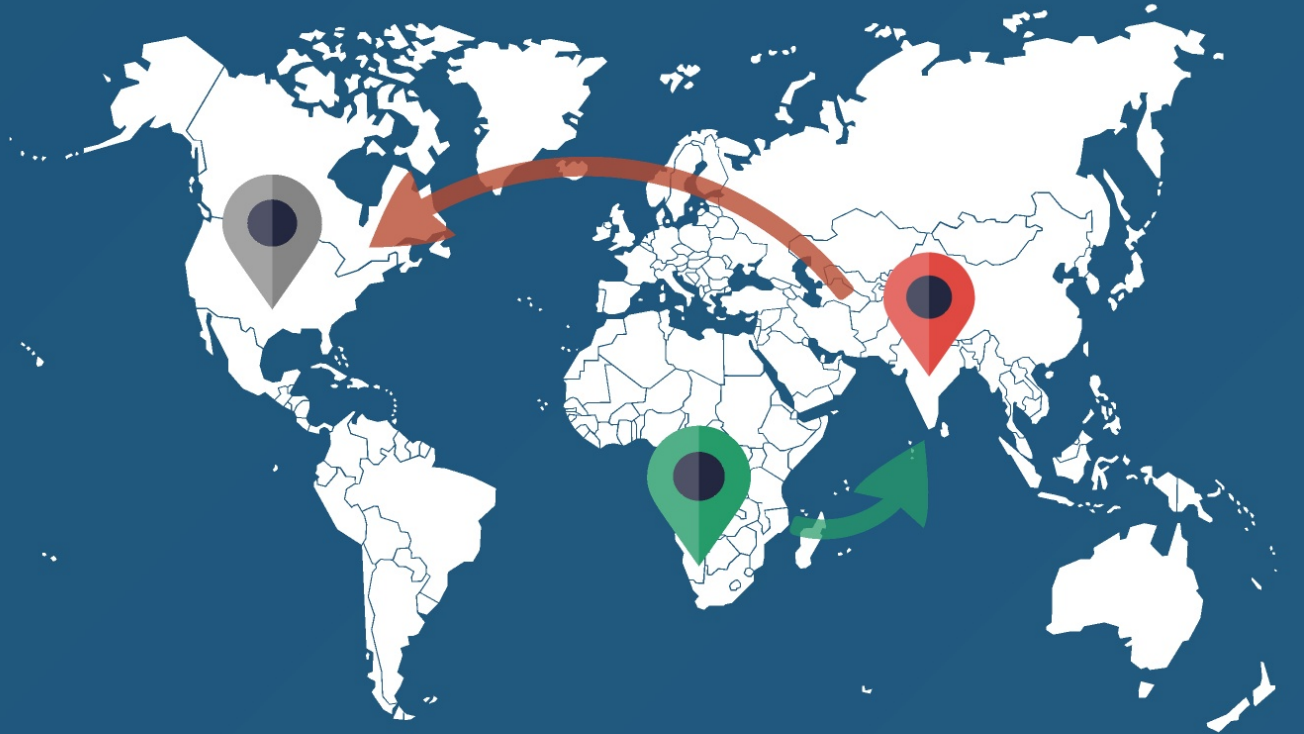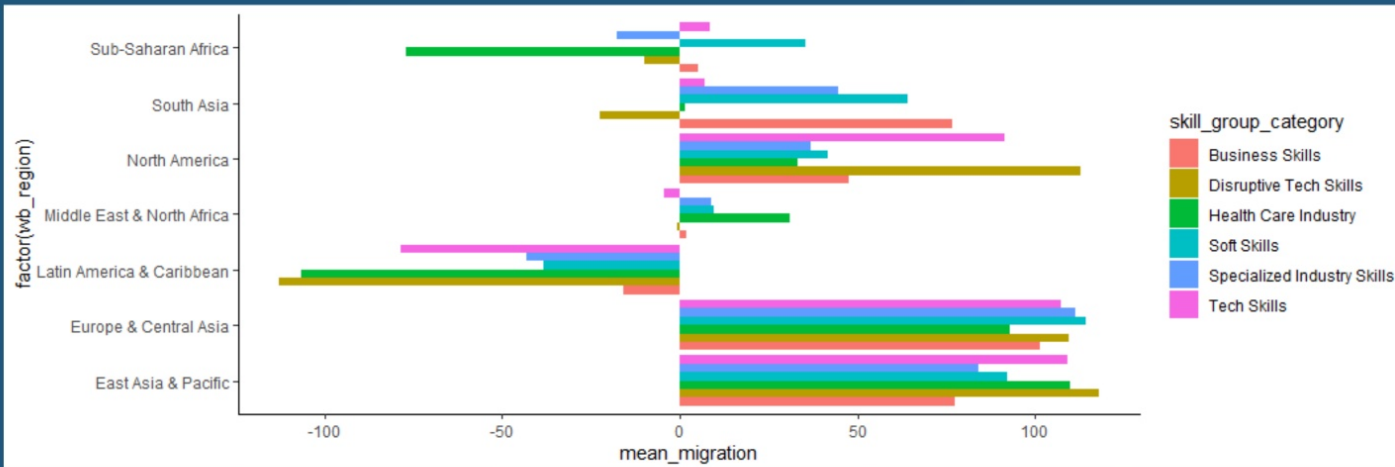
Problem Statements

Hypothesis 1

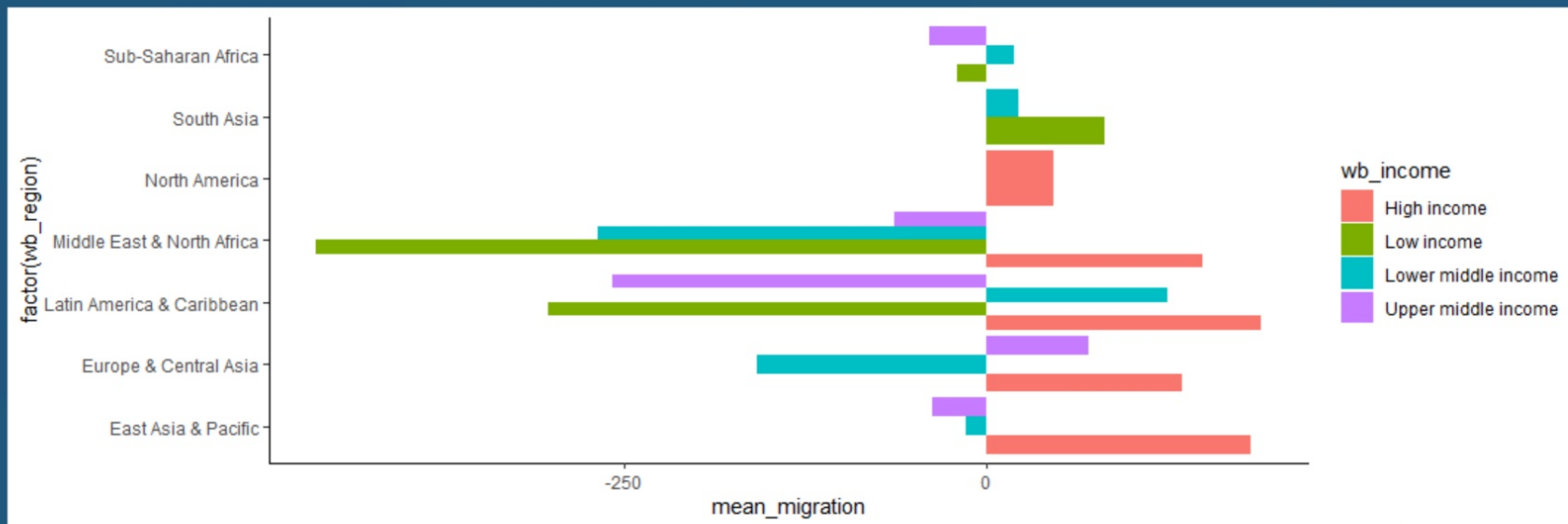Skill worker migration increases to region with higher HDI

Hypothesis 2

Migration (outgoing) of workers with Tech skills are predominant over workers with other specialized skills

Hypothesis 3

High income countries have the highest skill migration across all the income levels included.

Results

```
## 
## Coefficients:
##                              Estimate Std. Error  t value Pr(>|t|)
## (Intercept)                  437.8007    19.2294   22.767  < 2e-16 ***
## HDI_Skill                     51.6516    21.3513    2.419 0.015560 *
## Business_Skills                7.4833     3.6807    2.033 0.042044 *
## Specialized_Industry_Skills   -0.4237     3.3621   -0.126 0.899713
## Disruptive_Tech_Skills        -0.4793     5.8512   -0.082 0.934711
## Soft_Skills                   19.6884     5.1128    3.851 0.000118 ***
## Health_Care_Industry         -15.6673     4.8814   -3.210 0.001330 **
## Lowincome                   -168.8327     9.2758  -18.201  < 2e-16 ***
## Upper_middle_income         -191.4981     3.7684  -50.817  < 2e-16 ***
## Lower_middle_income         -142.0314     6.1238  -23.193  < 2e-16 ***
## as.factor(Year)2016         -431.7368     3.2301 -133.661  < 2e-16 ***
## as.factor(Year)2017         -446.0863     3.2319 -138.027  < 2e-16 ***
## as.factor(Year)2018         -427.2444     3.2352 -132.062  < 2e-16 ***
## as.factor(Year)2019         -427.2391     3.2368 -131.995  < 2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## 
## Residual standard error: 268.3 on 68720 degrees of freedom
##   (66 observations deleted due to missingness)
## Multiple R-squared:  0.357,  Adjusted R-squared:  0.3569
## F-statistic:  2935 on 13 and 68720 DF,  p-value: < 2.2e-16
```

Conclusion

- Skill migration increases towards countries with higher Human Development Index

- Tech skills were not found to have higher levels of skill migration compared to the other skill groups except for when it was compared to that of health care industry migration

- Skill migration increase towards higher income countries

Business Relevance

- Promotes competitive labor

- Shape talent attraction and retention programs

- Enables governments to work towards achieving a higher human development index.