# Understanding the relationship between the local and global digital economy and its social impact in Malaysia

*Complete Research*

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## Abstract

*The rapid growth of the Information and Communication Technology (ICT) industry has brought significant changes to the global economy and society, particularly in emerging economies such as Malaysia. This study aimed to investigate the relationship between ICT service exports and various aspects of development in Malaysia, including infrastructure, quality of life, economic growth, and gender equality. Through utilized quantitative analysis of secondary data obtained from the World Bank, multiple regression analysis was conducted to examine the relationship between ICT service exports and various indicators of development. The study concluded that the export of ICT services had a positive correlation with infrastructure development, improvements in the quality of life and gender equality. However, no significant correlation was found between ICT service exports and unemployment rate, highlighting the need for further research in the economic department. The study is limited by its reliance on secondary data and lack of qualitative analysis. Nonetheless, its findings offer valuable insights into the role of the ICT industry in driving social development in Malaysia.*
*Keywords: ICT, Malaysia, social development.*

## 1 Introduction

The information and communication technology (ICT) industry has emerged as a significant player in the digital economy, encompassing a broad range of products and services related to computing, telecommunications, and software development. The industry has been shown to have a positive impact on promoting technological progress, increasing output and productivity, and contributing to economic growth (World Bank, 2016). One of the most significant aspects of the ICT industry is its service exports, specifically ICT services such as software development, system integration, and technical support. ICT service exports have the potential to drive economic growth and improve the quality of life for people in many countries (Ministry and Pitner, 2014). Hence, the ICT industry's importance in the global economy cannot be overstated (Li et al., 2018).

This paper focuses on the case of Malaysia, a Southeast Asian country with a thriving ICT industry. Malaysia has been actively promoting its ICT industry through various policies and initiatives aimed at attracting investment and developing the necessary infrastructure (Rajenderan and Zawawi, 2019). The Malaysia Digital Economy Corporation was established to oversee the development of the country's digital economy, with a focus on promoting innovation, entrepreneurship, and talent development (Khin et al., 2010). These efforts have led to significant growth in the sector, with the country becoming a major exporter of ICT services in recent years.

The ICT industry growth on Malaysian society is seen as a key driver of economic growth, with potential benefits for infrastructure, job creation, and trade. However, the potential negative impacts on society, such as job displacement and the widening of the digital divide, must also be taken into account. Understanding the relationship between ICT service exports and various aspects of Malaysian society is, therefore, an important area of investigation.

## 2  Literature review

### 2.1  ICT service exports and its societal impacts

ICT service exports have a proven positive impact on various aspects of society, including economic growth, infrastructure development, and human development (Ji and Cho, 2015; Asongu and Le Roux, 2017; Acheampon et al., 2022). The growth of the ICT industry has contributed to increased literacy rates and facilitated access to healthcare services for a larger number of people, as shown in a study conducted in Pakistan (Arif, 2018). According to Arif (2018), with the expansion of ICT-related export services, the development of ICT infrastructure occurs simultaneously, leading to enhanced communication and connectivity. This can promote social cohesion and facilitate the exchange of ideas and information, which can benefit citizens in various ways. Moreover, the increased access to information can lead to more active participation in the political process, promoting democratic participation and transparency (Feenstra and Casero-Ripollés, 2014.).

It is important to note that the growth of the ICT industry can also have negative impacts on society, Veeramacheneni et al. (2007) reported that the expansion of ICT investment can negatively affect employment outcomes and lead to income inequality in developing countries due to the limited resources of poor people in developing countries. Hence, the specific impacts of the ICT industry on a country's society need to be analyzed and discussed on a case-by-case basis to understand the potential benefits and drawbacks for that particular country.

### 2.2  FDI and its societal impacts

Foreign Direct Investment (FDI) refers to a cross-border investment made by a firm or individual in one country into a company in another country, which involves the transfer of ownership and control (UNCTAD, 2020). Pohjola's (2000) cross-country study showed that ICT played a central role in economic expansion in developed countries, but its role in stimulating economic growth in developing countries was unclear.

Empirical studies have shown that FDI can lead to increased economic growth, job creation, and technological spill overs, thereby benefiting the host country's economy and society (Colen et al., 2009; Abor and Harvey, 2008). However, several studies have also highlighted the potential negative impacts of FDI on society, such as labor and environmental exploitation, resource depletion, and widening income inequality (Amadi, 2016; Dunning, 2002). These negative impacts can arise from factors such as weak regulatory frameworks, lack of accountability, and poor governance.

### 2.3  Relationships between FDI and ICT service exports

The relationship between FDI and ICT service exports is essential and multifaceted. ICT plays a crucial role in analyzing the impact of FDI flows as it can indirectly affects FDI by influencing factors such as innovation and entrepreneurship (Bhujabal and Sethi, 2020). The level of sophistication of ICT infrastructure in the host country is often one of the main considerations for foreign investors seeking export-oriented FDI, highlighting the importance of ICT service exports for FDI growth (Suh and Khan, 2003). Furthermore, Ali and Sassi (2017) have argued that ICT use can lead to greater transparency, reduce corruption, and thus remove barriers to FDI inflows, further emphasizing the close relationship between the two.

Overall, the complex and dynamic relationship between FDI and ICT service exports has diverse impacts on economic growth and social development. Therefore, in the research design of this paper,

instead of isolating ICT service export as an independent variable only, FDI is also considered as an important variable. This approach reduces the arbitrariness of the findings and allows for a more comprehensive measurement of the role of the ICT industry on Malaysian society.

# 3   Methodology

This study aims to investigate the impact of ICT service export on various aspects of Malaysian society between 2000 and 2021. To test this hypothesis, four sub-hypotheses were formulated based on existing literature, including positive correlations between the ICT industry and infrastructure, life quality, economic development, and gender equality development:

- H1: There is a positive correlation between the ICT industry and infrastructure development.
- H2: There is a positive correlation between the ICT industry and life quality development.
- H3: There is a positive correlation between the ICT industry and economic development.
- H4: There is a positive correlation between the ICT industry and gender equality development.

To test these sub-hypotheses, a range of economic and social development indicators were collected for the period under study, primarily from the World Bank. The human development index, however, was obtained from the Organisation for Economic Co-operation and Development (OECD). The dataset comprises a range of economic and social development indicators. For each hypothesis, two pertinent indicators were selected and analyzed, as outlined in Table 1.

| Development Category | Indicators | Description |
|---|---|---|
| Infrastructure Development | Intellectual Property Charges | "payments between residents and nonresidents for the authorized use of proprietary rights and for the use, through licensing agreements, of produced originals or prototypes and related rights" |
| | Internet Penetration Rate | "individuals who have used the Internet (from any location) in the last 3 months. The Internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV etc" |
| Life Quality Development | Life Expectancy at Birth | "the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life" |
| | Human Development Index | "a summary measure of average achievement in key dimensions of human" |
| Economic Development | GDP per Capita | "gross domestic product divided by midyear population" |
| | Unemployment Rate | "the share of the labor force that is without work but available for and seeking employment" |
| Gender Equality Development | Female Labor Participation Rate | "the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period" |
| | Female Parliamentary Participation Rate | the percentage of parliamentary seats in a single or lower chamber held by women. |

*Table 1.        Selected Indicators for Each Hypothesis*

The study first employs correlation analysis to determine the direction and strength of the relationship between the variables (Curtis et al., 2016). Before proceeding with further analysis, the stationarity of the data is assessed using the Augmented Dickey-Fuller (ADF) test, which helps ensure that the statistical properties of the data remain constant over time and avoid misleading results in time series analysis (Nkoro and Uko, 2016).

During the regression analysis, the model incorporates two independent variables, namely ICT service exports and FDI net inflows. The inclusion of FDI net inflows is based on previous studies suggesting that FDI has a positive influence on a host country's welfare, particularly in education, health, and standard of living (Colen et al., 2009; Abor and Harvey, 2008). Therefore, it is important to include FDI net inflows in the regression model to investigate their potential influence on the various aspects of Malaysian society. Moreover, the use of two variables in the regression analysis can make the results more robust by reducing the impact of any outliers or measurement errors in the data (Sousa and Stošić, 2005). By including both variables in the model, the study can assess their relative impact on the various indicators and determine which variable has a more significant effect. Overall, the use of both variables provides a comprehensive analysis of their impact on the various aspects of Malaysian society.

By analysing the results of both the regression and correlation analyses, this study tests the four hypotheses above and summarizes the impact of ICT service exports on various aspects of Malaysian society.

# 4 Analysis

## 4.1 Correlation analysis results

Based on the correlation analysis, it can be observed that all variables have a positive relationship with at least one of ICT service exports and ICT service export ratio.
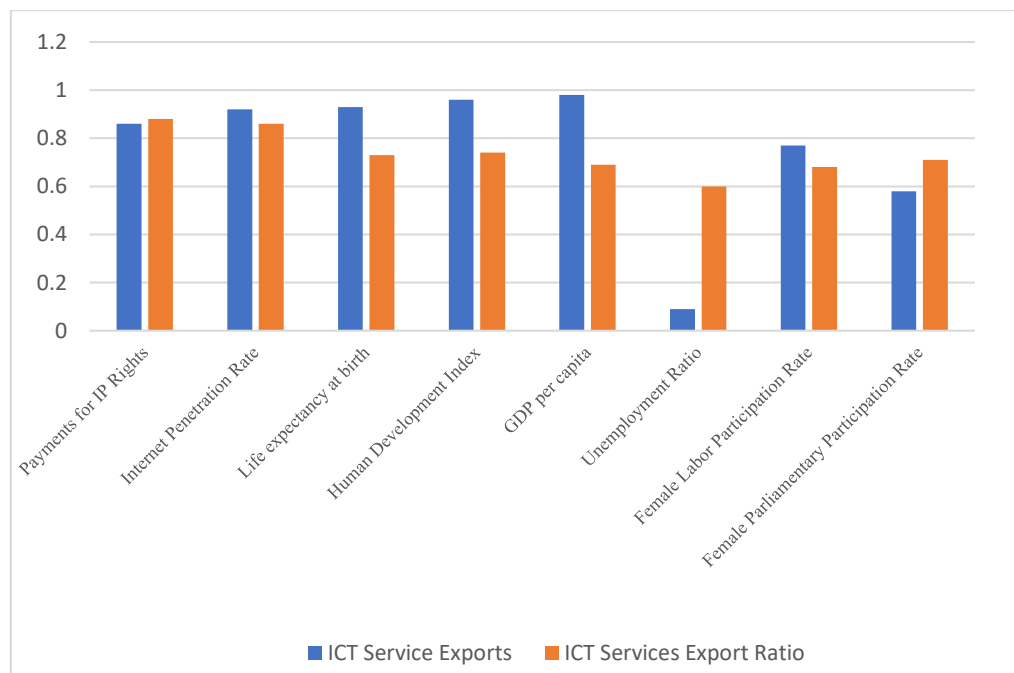


*Figure 1.        Correlation analysis results between eight index and ICT service exports data*

The highest correlations are observed for GDP per capita (r=0.98), followed by internet penetration rate (r=0.92), and human development index (r=0.96). These results suggest that there is a strong positive relationship between ICT service exports and various aspects of Malaysian society.

## 4.2  Regression analysis results

### 4.2.1  Infrastructure Development

The regression analysis demonstrates a good fit of the model, with an R-squared value of 0.66, indicating that 66% of the variation in intellectual property charges is explained by the independent variables. The significant coefficient of log-transformed ICT service exports ($537,800,000) indicates that a 1% increase in this variable is linked to a $537,800,000 rise in intellectual property charges, with other variables held constant. However, FDI inflows do not significantly affect intellectual property charges.

| Independent Variable | Coefficient | t-value | p-value | VIF Factor |
|---|---|---|---|---|
| IP charges | -10890000000 | -5.29 | 0.00 | |
| log_ICT | 537800000.00 | 5.24 | 0.00 | 1.24 |
| log_FDI | 39780000.00 | 0.56 | 0.58 | 1.24 |
| R-squared: 0.66 | | | | |
| Adjusted R-squared: 0.63 | | | | |

*Table 2.        OLS Regression Results: Intellectual Property Charges*

R-squared value of 0.820 shows a strong fit of the model, with an R-squared value of 0.820. The coefficient of log-transformed ICT service exports is statistically significant at the 0.05 level with a coefficient value of 22.12, while the coefficient of log-transformed FDI inflows is not statistically significant. In short, there is a significant correlation between ICT service exports and internet penetration rate. On the other hand, FDI inflows do not have a significant effect on internet penetration rate, according to the findings of the analysis

| Independent Variable | Coefficient | t-value | p-value | VIF Factor |
|---|---|---|---|---|
| Internet penetration rate | -443.79 | -7.96 | 0.00 | |
| log_ICT | 22.12 | 7.97 | 0.00 | 1.24 |
| log_FDI | 1.57 | 0.81 | 0.43 | 1.24 |
| R-squared: 0.820 | | | | |
| Adjusted R-squared: 0.801 | | | | |

*Table 3.        OLS Regression Results: Internet Penetration Rate*

### 4.2.2  Life Quality Development

The OLS regression analysis on the Human Development Index (HDI) demonstrates a good fit of the model, with an R-squared value of 0.822. The coefficient of log-transformed ICT service exports is statistically significant, indicating that a 1% increase in ICT service exports is associated with a 0.04 increase in HDI. However, the coefficient of log-transformed FDI inflows is not statistically significant.

| Independent Variable | Coefficient | t-value | p-value | VIF Factor |
|---|---|---|---|---|
| Human development index | -0.03 | -0.34 | 0.74 | |
| log_ICT | 0.04 | 8.07 | 0.00 | 1.24 |
| log_FDI | 0.00 | 0.76 | 0.46 | 1.24 |
| R-squared: 0.835 | | | | |
| Adjusted R-squared: 0.818 | | | | |

*Table 3.          OLS Regression Results: Human Development Index*

Similarly, the coefficient of log-transformed ICT service exports indicates that a 1% increase in ICT service exports is associated with a 0.9142% increase in life expectancy at birth, while the coefficient of log-transformed FDI inflows is not statistically significant. Overall, the results suggest that ICT service exports have a significant positive impact on life expectancy at birth in Malaysia, while FDI inflows do not have a significant effect.

| Independent Variable | Coefficient | t-value | p-value | VIF Factor |
|---|---|---|---|---|
| Life expectancy at birth | 53.89 | 24.81 | 0.00 | |
| log_ICT | 0.91 | 8.45 | 0.00 | 1.24 |
| log_FDI | 0.06 | 0.80 | 0.43 | 1.24 |
| R-squared: 0.835 | | | | |
| Adjusted R-squared: 0.818 | | | | |

*Table 4.          OLS Regression Results: Life expectancy at birth*

### 4.2.3  Economic Development

The OLS regression analysis on GDP per capita demonstrates a well-fitting model, with an R-squared value of 0.927. The statistical analysis revealed significant coefficients for both log-transformed ICT service exports and log-transformed FDI inflows. Specifically, an increase of 1% in ICT service exports was linked to a $2,933.21 rise in GDP per capita. In comparison, an increase of 1% in FDI inflows was linked to a $409.25 rise in the dependent variable. The coefficients of these variables suggest that the effect of an increase in ICT service exports on GDP per capita is greater than the effect of an increase in FDI inflows.

| Independent Variable | Coefficient | t-value | p-value | VIF Factor |
|---|---|---|---|---|
| GDP per capita | -63070.00 | -13.53 | 0.00 | |
| log_ICT | 2933.21 | 12.63 | 0.00 | 1.24 |
| log_FDI | 409.25 | 2.54 | 0.02 | 1.24 |
| R-squared: 0.927 | | | | |
| Adjusted R-squared: 0.919 | | | | |

*Table 5.          OLS Regression Results: GDP per capita*

The regression analysis results showed that neither ICT service exports nor FDI inflows have a significant impact on the unemployment rate in Malaysia, as the model had a weak fit with an R-squared value of 0.27. Although the ICT industry and foreign investment may contribute to economic growth, they may not result in significant changes in employment rates. Further research is needed to fully understand the relationship between these factors and employment in Malaysia,

| Independent Variable | Coefficient | t-value | p-value | VIF Factor |
|---|---|---|---|---|
| Unemployment rate | 2.98 | 10.87 | 0.00 | |
| log_ICT% | 0.30 | 2.08 | 0.05 | 1.00 |
| log_FDI% | -0.11 | -1.53 | 0.14 | 1.00 |
| R-squared: 0.27 | | | | |
| Adjusted R-squared: 0.19 | | | | |

*Table 6.          OLS Regression Results: Unemployment Rate*

### 4.2.4   Gender Equality Development

The R-squared value of 0.430 indicates that the model explains 43% of the variation in the labor force participation rate of females. The coefficients for the independent variables are statistically significant ($p < 0.05$) for log_ICT, but not for log_FDI.

| Independent Variable | Coefficient | t-value | p-value | VIF Factor |
|---|---|---|---|---|
| Female labor participation rate | 32.44 | 30.54 | 0.00 | |
| log_ICT% | 2.20 | 3.93 | 0.00 | 1.00 |
| log_FDI% | 0.26 | 0.94 | 0.36 | 1.00 |
| R-squared: 0.458 | | | | |
| Adjusted R-squared: 0.401 | | | | |

*Table 7.        OLS Regression Results: Female Labor Participation Rate*

The OLS regression results reveal that the model has a weak explanatory power (R-squared =0.329) for the Female Parliamentary Participation Rate. There is no significant relationship between FDI and Female Parliamentary Participation Rate, as the coefficient for the logarithm of FDI is not statistically significant at the 0.05 level. However, the coefficient for the logarithm of ICT is statistically significant at the 0.01 level, indicating a significant positive relationship between ICT service exports and Female Parliamentary Participation Rate.

| Independent Variable | Coefficient | t-value | p-value | VIF Factor |
|---|---|---|---|---|
| Female parliamentary participation rate | 7.23 | 1.30 | 0.00 | |
| log_ICT% | 2.09 | 0.69 | 0.01 | 1.00 |
| log_FDI% | 0.02 | 0.35 | 0.97 | 1.00 |
| R-squared: 0.329 | | | | |
| Adjusted R-squared: 0.259 | | | | |

*Table 8.        OLS Regression Results: Female Parliamentary Participation Rate*

## 5   Discussion

The results of regression study support three hypotheses that suggest the ICT industry has a positive correlation with infrastructure development, life quality development and gender equality development.

Specifically, the results show that ICT service exports have a significant positive impact on infrastructure development, as demonstrated by its association with intellectual property charges and internet penetration rate. In contrast, FDI inflows do not significantly affect either of these indicators, supporting hypothesis 1. This finding is consistent with previous studies that have shown that the development of the ICT industry has a positive impact on infrastructure development in different countries (Arif, 2018). Moreover, the lack of a significant relationship between FDI inflows and infrastructure development supports the idea that the growth of the ICT industry is not solely dependent on foreign investment. While FDI inflows may contribute to the growth of the ICT industry, they may not have a significant impact on infrastructure development.

Furthermore, the study reveals that ICT service exports have a significant positive impact on the development of quality of life, as reflected in their association with the Human Development Index and life expectancy at birth. This result aligns with the previous study which suggested that the use of ICT in Pakistan has the potential to improve education, health, and overall living standards (Arif, 2018). However, FDI inflows do not significantly affect any of these indicators which further highlights the importance of ICT in this aspect. It may be due to the fact that FDI tends to be concentrated in specific

sectors and locations. This means that FDI may not necessarily contribute to the overall improvement of human development indicators across the country as a whole. Additionally, FDI inflows may be subject to fluctuations and may not be a reliable source of long-term investment.

The positive relationship between ICT service exports and GDP per capita supports hypothesis 3, while the lack of a significant relationship between ICT service exports and unemployment rate suggests that further exploration is needed to support this hypothesis. Despite the ICT industry has been associated with the creation of new jobs, it has also led to job displacement and the widening of the digital divide (Veeramacheneni et al., 2007). The creation of high-skilled jobs in areas such as software development may have been offset by the decline of low-skilled jobs in areas such as manufacturing. Furthermore, the growth of the ICT industry may have led to increased competition for jobs, which could have offset the positive impact of job creation in certain areas (Xu and Qiu, 2014). Therefore, further research is needed to understand the complexities of the relationship between ICT service exports and unemployment rate in Malaysia.

Finally, the study shows a significant positive correlation between ICT service exports and female parliamentary participation rate and female labor force participation rate, supporting hypothesis 4. These results suggest that the ICT industry plays an important role in promoting gender equality. This result may be attributed to the ICT industry's capacity to generate new employment opportunities for women and encourage their active involvement in the workforce. The inherent flexibility of many ICT positions may render them more viable for women who strive to balance their familial duties with their professional obligations (Hafkin and Huyer, 2007). Consequently, the growth of the ICT industry can be regarded as a significant contributor to the advancement of gender equality.

## 6   Conclusion

This study sought to examine the impact of ICT service exports on various aspects of development in Malaysia. The findings suggest that the export of ICT services has a significant positive impact on infrastructure development, quality of life, and gender equality.

However, the lack of a significant relationship between ICT service exports and unemployment rate suggests the need for further research on the economic development. While the ICT industry has been associated with the creation of new jobs, it has also led to job displacement and the widening of the digital divide. The growth of the ICT industry may have led to increased competition for jobs, which could have offset the positive impact of job creation in certain areas.

Despite the limitations of the study, such as its reliance on secondary data and lack of qualitative analysis, the findings offer valuable insights into the role of the ICT industry in driving social development in Malaysia. The study has implications for policymakers and stakeholders in the ICT industry, who can utilize the findings to make informed decisions about investment and development in the sector.

In general, the study highlights the significance of the ICT industry in driving social change and development. As such, it is important to continue investing in the sector while also conducting further research to ensure that the industry's benefits are maximized while minimizing any potential negative impacts. This approach will ensure that the ICT industry plays a critical role in promoting social and economic development in Malaysia.

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## Appendix 1: Reflection

Throughout this module, I have faced numerous challenges in my learning journey, which I would like to reflect on in two ways.

Firstly, unlike last semester's design module, this semester's weekly assignments are more structured, but I don't think it's rigid. The instructions were reasonable and logical, which allowed me to reflect on the gaps in my knowledge and learn from the literature. Compared to last semester, I was more motivated to read as the content was easy to understand and contained less technical jargon. The literature reading process was actually a lot better than I thought it would be. Compared to last semester, I was more motivated to read because the content was not too difficult for me to understand and there was less computer jargon. And, most importantly, I enjoyed the humanistic perspective of the literature.

Before studying this module, outsourcing was not very different for me from other economic activities. This literature brought the human aspect of outsourcing to life, allowing me to understand the roles involved, the benefits and difficulties faced by people. I "saw" Indian employees who were confused about their identity in offshore customer service, Irish companies who were sometimes satisfied and sometimes frustrated in the communication and negotiation process, and microworkers who were struggling to assert their rights. Some general topics such as how to build trust, develop leadership, and promote collaboration are also addressed in the literature.

We digital innovation students may later be involved in outsourcing activities in one capacity or another, perhaps as platform designers, outsourced technical staff, or as leaders of outsourced staff. These cases certainly help us understand in advance the challenges that may arise and the struggles that people may experience. In this case, the self-examination perspective and the ability to empathize will help us to be more effective in our work.

Secondly, in the process of writing this final report, I researched how to use python to do data analysis, and also learned about some basic mathematical statistics, such as regression analysis and correlation analysis. This self-directed learning process was not easy, but I finally finished it, and I felt a sense of accomplishment. However, I gradually began to question the accuracy of data analysis results.

Is a conclusion made by simply comparing numbers really accurate? I don't think that being accurate to two decimal places is really accurate. The discipline of statistics has a very strict system and process, and when I do data analysis, I try to follow the proper process as much as possible, making sure that each piece of data meets the criteria to proceed to the next step before building the model.

Yes, the process is arguably scientific, but scientific is not necessarily correct. I still feel uncertain about my conclusion, or perhaps, I think there is something missing here. Maybe it's what impressed me the most in the weekly literature reading, the role of people involved in the event that you want to study.

The lack of qualitative analysis of my final report made it obvious to me the difference between the paper I wrote and the paper I read in class, the difference in the level of emotional engagement.

When I read the paper I wrote, I did not feel that real concern for the problem I was studying (although that makes sense, since it was not a topic I chose completely spontaneously). But if you look at the level of writing skill, it is the difference in story telling ability. When I read that writing, I do feel like I'm reading a novel or a story, and the flow between the lines is so natural. I hope that in next semester's essay writing I will have the opportunity to practice qualitative writing and imitate and learn more about this kind of story telling ability.

I would like to conclude by saying that I think there are many similarities between the core of this class and last semester's DDC, in that there are designers (such as policy maker and platform designer) in the implementation of outsourcing, and that empathy and the ability to seek feedback are still very important factors in the development process. Whether we are evaluating or learning about an economic or technical activity, we should value the role of the person in it more than the data.

## Appendix 2: Partly screenshots of data analysis process

```python
from statsmodels.tsa.stattools import adfuller
import pandas as pd


df = pd.read_csv('final.csv')


columns = ['Charges for the use of intellectual property, payments (BoP, current US$)',
           'ICT service exports',
           'ICT service exports (% of service exports, BoP)',
           'Foreign direct investment, net inflows (BoP, current US$)',
           'GDP per capita (current US$)',
           'Unemployment, total (% of total labor force) (modeled ILO estimate)',
           'Life expectancy at birth, total (years)',
           'Individuals using the Internet (% of population)',
           'Foreign direct investment, net inflows (% of GDP) ',
           'Labor force, female (% of total labor force)',
           'GNI (current US$)',
           'Human Development Index',
           'Proportion of seats held by women in national parliaments (%)']

# Perform ADF test for each column
for col in columns:
    result = adfuller(df[col])
    print(f'Column: {col}')
    print(f'Test statistic: {result[0]}')
    print(f'P-value: {result[1]}\n')
```

```python
# Log-transform the variables
data['log_ICT'] = np.log(data['ICT service exports'])
data['log_FDI'] = np.log(data['Foreign direct investment, net inflows (BoP, current US$)'])

# Define the independent variables
X = data[['log_ICT', 'log_FDI']]

# Define the dependent variable
Y = data['Life expectancy at birth, total (years)']

# Add a constant term to the independent variables
X = sm.add_constant(X)

# Fit the regression model
model = sm.OLS(Y, X).fit()

print(model.summary())

from statsmodels.stats.outliers_influence import variance_inflation_factor

# Calculate VIFs for each independent variable
vif = pd.DataFrame()
vif["VIF Factor"] = [variance_inflation_factor(X.values, i) for i in range(X.shape[1])]
vif["features"] = X.columns

print(vif)
```

## Appendix 3: Partly screenshots of data analysis results

```
                              OLS Regression Results
================================================================================
Dep. Variable:     Life expectancy at birth, total (years)   R-squared:                       0.835
Model:                                          OLS   Adj. R-squared:                  0.818
Method:                               Least Squares   F-statistic:                     48.17
Date:                              Tue, 25 Apr 2023   Prob (F-statistic):           3.62e-08
Time:                                      22:23:51   Log-Likelihood:                -6.8563
No. Observations:                                22   AIC:                             19.71
Df Residuals:                                    19   BIC:                             22.99
Df Model:                                         2
Covariance Type:                          nonrobust
================================================================================
                 coef    std err          t      P>|t|      [0.025      0.975]
--------------------------------------------------------------------------------
const         53.8885      2.172     24.810      0.000      49.342      58.435
log_ICT        0.9142      0.108      8.449      0.000       0.688       1.141
log_FDI        0.0602      0.075      0.802      0.433      -0.097       0.217
================================================================================
Omnibus:                          2.007   Durbin-Watson:                   0.643
Prob(Omnibus):                    0.367   Jarque-Bera (JB):                1.677
Skew:                             0.558   Prob(JB):                        0.432
Kurtosis:                         2.236   Cond. No.                         886.
================================================================================

Notes:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
    VIF Factor features
0  820.863632    const
1    1.236066  log_ICT
2    1.236066  log_FDI
```

```
Column: Charges for the use of intellectual property, payments (BoP, current US$)
Test statistic: -0.19179207728692646
P-value: 0.9394929342156013

Column: ICT service exports
Test statistic: -1.0021431284227273
P-value: 0.7524818419813093

Column: ICT service exports (% of service exports, BoP)
Test statistic: 0.46782585433906254
P-value: 0.9838616764106507

Column: Foreign direct investment, net inflows (BoP, current US$)
Test statistic: -2.5730846112601715
P-value: 0.09868869958396842

Column: GDP per capita (current US$)
Test statistic: -1.131987797323333
P-value: 0.7021484704377887

Column: Unemployment, total (% of total labor force) (modeled ILO estimate)
Test statistic: -3.338397694641358
P-value: 0.013246947607864778

Column: Life expectancy at birth, total (years)
Test statistic: -4.324112131988933
P-value: 0.00040338916753070175

Column: Individuals using the Internet (% of population)
Test statistic: 9.741878706631658
P-value: 1.0

Column: Foreign direct investment, net inflows (% of GDP)
Test statistic: -15.224196486728417
P-value: 5.4325078575288525e-28

Column: Labor force, female (% of total labor force)
Test statistic: -1.679005390551017
P-value: 0.44196069575029034
```