

## Project 2 - Visualization for storytelling with Tableau

Group 12

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Title:

Mapping Hong Kong's Socioeconomic Landscape: Exploring Districts' Population

Introduction:

Hong Kong is a vibrant city known for its dynamic economy and diverse population. But beyond the glitz and glamour, there are significant socioeconomic disparities that exist among its various districts. In this data visualization, we dive deeper into Hong Kong's socioeconomic landscape by exploring critical demographic and economic indicators of its districts' populations. Through compelling visualizations, we aim to shed light on the diverse socioeconomic status of Hong Kong's districts and uncover patterns and trends that may reveal important insights.

Datasets:

The two datasets are from the Hong Kong Geodata store (<https://geodata.gov.hk/>) named Population By-census Statistics for the years 2011 and 2016. We chose these datasets because they display a wide range of useful data for further investigation and comparison of the change in 5 years. The following are the links:

- <https://geodata.gov.hk/gs/view-dataset?uuid=7e5f6d02-30ff-406e-b298-1cce8c2adb28&sidx=0>
- <https://geodata.gov.hk/gs/view-dataset?uuid=e7c0c11c-207d-4acc-aa29-1faa6559b416&sidx=0>

Preprocessing steps:

After carefully analyzing datasets, our group identified the data we wanted to focus on. Because the datasets contained far more information than we required, we saved only key findings; for example, we deleted the "Land total" row for its less relevance. Data reduction simplified and improved the accuracy of our analysis.

Visual Design:

The data visualization is presented as an interactive map of Hong Kong, with its districts color-coded to represent different socioeconomic indicators. The map is designed to be visually appealing and user-friendly, with a clear legend explaining each district's color codes and

accompanying labels. The centers of districts are also represented with dots, and the working population number determines their sizes. Users can interact with the map to explore different socioeconomic indicators and districts of interest.

#### Key Findings:

The data visualization reveals intriguing insights about the socioeconomic status of Hong Kong's districts. Here are some key findings:

- **Working Force/Employment:** The map highlights the working population differences among districts, with darker shades indicating areas with more employed population and lighter shades indicating fewer employed people. The districts of Sha Tin, Eastern, Kwun Tong, and Yuen Long stand out with darker shades, showing higher employment rates for both 2011 and 2016. Overall, we see how the increase in total population led to more employed people (209 thousand) rather than unemployed (56 thousand).
- **Income Disparity:** The tables show the gender income disparity in each Hong Kong district, with darker shades indicating higher average income and lighter shades indicating lower average income. In 2011, the Central & Western, Wan Chai, and Tsuen Wan districts stood out with darker shades, showing higher income levels for both genders. It's worth noting that the disparity between the highest-paid districts for men has stayed the same in five years, but the picture for women is quite different. Furthermore, the average female salary fell from \$19,000 in Wan Chai in 2011 to \$13,000 in Tsuen Wan in 2016. Overall, we can clearly see the gender gap in pay in all districts of Hong Kong, which could reach three times higher salaries for men in Wan Chai district in 2016 (Av. for men - \$25,500, av. for women - \$9,000).
- **Education Levels:** There is a large increasing trend in acquiring degree courses after post-secondary education after population growth from 2011 to 2016. By earning at least one educational degree, the population is considered educated. There were 250 000 more educated persons in 2016 than in 2011. The majority of Hong Kong residents still have upper-secondary education. Overall, the trend is positive: Hong Kong's population is growing, and its residents are becoming more educated.

#### Conclusion:

In conclusion, the data visualization provides a rich and dynamic exploration of Hong Kong's socioeconomic landscape, revealing diverse patterns and trends among its districts' populations. The visualizations on employment patterns, income disparity, and education levels offer valuable insights for policymakers, researchers, and residents alike to understand better the socioeconomic status of Hong Kong's various districts. By shedding light on these crucial socioeconomic indicators, the data visualization contributes to a deeper understanding of Hong Kong's complex socioeconomic landscape. It stimulates further discussions on issues related to gender equality, education, and employment in the city. Overall, our data visualization serves as

a powerful tool for storytelling and creating awareness about the socioeconomic dynamics of Hong Kong's various districts.

Here is the end result photos:

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#### Background and Introduction

Hong Kong is a **vibrant city** known for its **dynamic economy** and **diverse population**. But beyond the glitz and glamour, there are significant **socioeconomic disparities** that exist among its various districts. In this data visualization, we dive deeper into Hong Kong's socioeconomic landscape by exploring key **demographic** and **economic indicators** of its districts' populations. Through compelling visualizations, we aim to shed light on the diverse socioeconomic status of Hong Kong's districts and uncover patterns and trends that may reveal important insights.

The **visualization** reveals intriguing insights about the socioeconomic status of Hong Kong's districts. Here are some **key components**:

1. Working Force/Employment
2. Income Disparity
3. Education Level

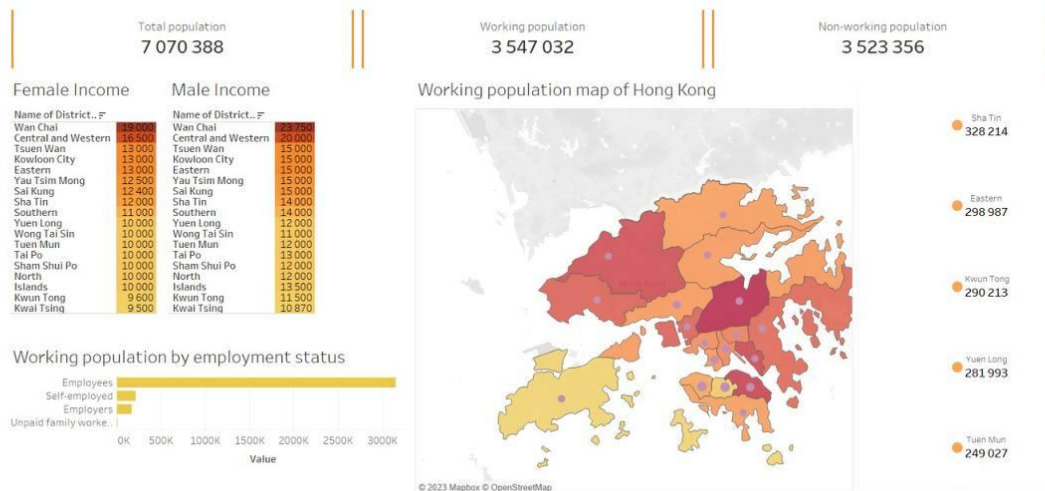
Datasets were taken from the **Hong Kong Geodata store** for years **2011** and **2016**. (other years were not available)

NonWork2016 (2) Working2016 (2) Dots2016 (2) Status2016 (2) Female2011 (2) Male2011 (2) NonWork2011 (2) Working2011 (2) Dots2011 (2) Status2011 (2) Female2016 (2) Male2016 (2) Group Project Page Introduction

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#### Working Population and Income disparity of Hong Kong in 2011

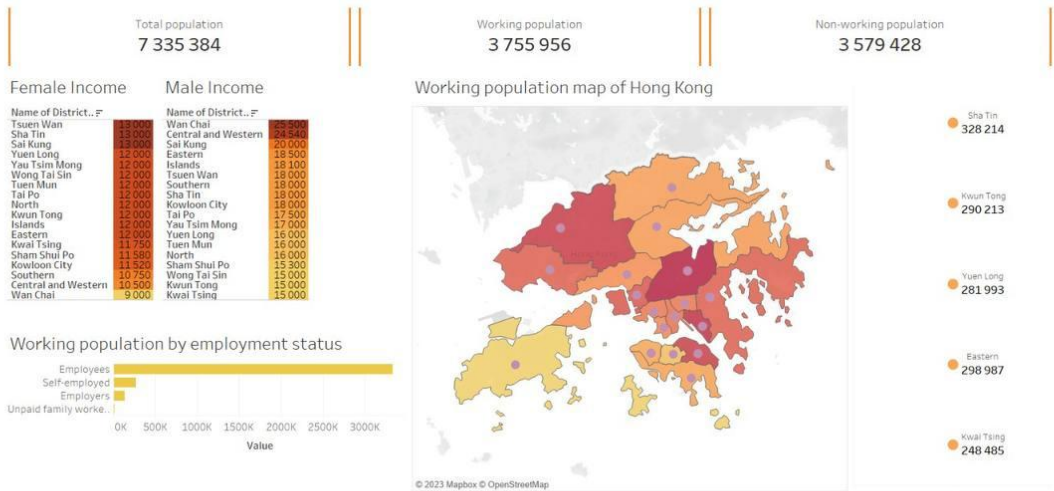


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Working Population and Income disparity of Hong Kong in 2016



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Education Level of Hong Kong in 2011



NonWork2016 (2) Working2016 (2) Dots2016 (2) Status2016 (2) Female2011 (2) Male2011 (2) NonWork2011 (2) Working2011 (2) Dots2011 (2) Status2011 (2) Female2016 (2) Male2016 (2) Group Project Page Introduction

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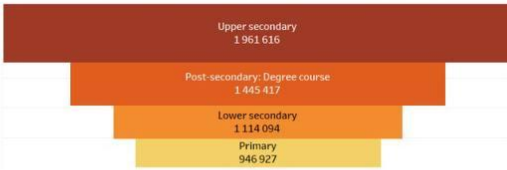
Education Level of Hong Kong in 2016

Total population 7 335 384	Population with obtained educational level 6 505 022	Population without obtained educational level 830 362
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Educational Institutions in Hong Kong



Top-4 Educational Levels Obtained in Population aged over 15



Number of Population aged 15 and above attained educational degree by District Council districts

