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THE OVERVIEW OF THE GEOGRAPHY OF THE GREATER BAY AREA

Understanding ‘bay area’ using geographical perspectives
**GEOGRAPHICAL PERSPECTIVES...**

**Place**...absolute and relative locations

**Scale**...size of something compared with something else

**Distance**...space between two locations; proximity; relative distance
  (time and cost)

**Distribution**...arrangement of features or object on the earth’s surface

**Movement**...frequency, volume and magnitude of movement

**Region**...a definable area containing one or more characteristics that
distinguish it from surrounding area

**Change**...degree to which something alters, or is modified, over time

**Process**...a series of ongoing events or steps that lead to the
development

**Spatial association**...the degree to which two or more events are
similarly distributed or arranged on the Earth’s surface.

**Sustainability**...the capacity of the environment and social systems to
support people and other living things now and into the future
PLACE, SCALE AND REGION....

“Bay area” is a region with a group of cities and counties located by the sea. The cities and counties form an interconnected economic and social systems that usually is important to the national or global economies.

Major bay area overseas:
- Tokyo Bay Area
- San Francisco Bay Area
- New York Bay Area
A bounded or boundless region?
- The idea of a region is not static and always changing

The 3 central cities
(San Francisco, Oakland, and San Jose)

The 9-county Bay Area

Northern California Megaregion

A bay area usually consists of cities (highly urbanized area) and town areas serving as the hinterland.

9 counties that touch the San Francisco Bay, with 3 major cities (San Francisco, Oakland, San Jose)

Tokyo metropolitan + Kanagawa Prefecture 神奈川県, Chiba Prefecture 千葉県 and Saitama Prefecture 球玉県 (one capital and three counties)
DISTRIBUTION AND MOVEMENT....

- Polycentric development

These diagrams, drawn by an urban planner and GIS specialist at AECOM, show changing settlement patterns of the Bay Area as it progressed from a monocentric region clustered around San Francisco to a polycentric one with contiguous growth along highway corridors and spilling over the hills to areas "off the map."

DISTRIBUTION AND MOVEMENT....

- Transport network

San Francisco Bay Area – highway and Bay Area Rapid Transit (BART) networks

Tokyo Bay Area – rail and subway networks

http://baycityguide.com/media/BART-Map.pdf
DISTRIBUTION AND MOVEMENT....

- Commuting patterns

A. The classical monocentric model  B. The polycentric or dispersed model  C. The composite model

- Processes involved in models of urban morphology

Population densities:
- Centre of activity including employment and recreation
- Movement of people

Common commuting origins and destinations

Commuting in the Bay Area
Connections of 50 or more

Long distance commuting

Commuting in the Bay Area
Journeys of 30 miles or more

Migration – coming in and going out

The New York Times: Housing in San Francisco is so costly, restaurant workers are leaving the city for more affordable regions; Some of the city's restaurants can't find, or can't afford, front-of-house workers.
PROCESS...

- Port development is usually important to bay area economies

### TOP 50 WORLD CONTAINER PORTS

<table>
<thead>
<tr>
<th>Rank</th>
<th>Port</th>
<th>Volume 2018 (Million TEU)</th>
<th>Volume 2015 (Million TEU)</th>
<th>Volume 2014 (Million TEU)</th>
<th>Volume 2013 (Million TEU)</th>
<th>Volume 2012 (Million TEU)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Shanghai, China</td>
<td>37.13</td>
<td>36.54</td>
<td>35.29</td>
<td>33.62</td>
<td>32.53</td>
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<td>2</td>
<td>Singapore</td>
<td>30.90</td>
<td>30.92</td>
<td>33.87</td>
<td>32.60</td>
<td>31.65</td>
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<tr>
<td>3</td>
<td>Shenzhen, China</td>
<td>26.97</td>
<td>24.20</td>
<td>24.03</td>
<td>23.28</td>
<td>22.94</td>
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<tr>
<td>4</td>
<td>Ningbo-Zhoushan, China</td>
<td>21.60</td>
<td>20.63</td>
<td>19.45</td>
<td>17.33</td>
<td>16.83</td>
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<tr>
<td>5</td>
<td>Busan, South Korea</td>
<td>19.85</td>
<td>19.45</td>
<td>18.65</td>
<td>17.09</td>
<td>17.04</td>
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<tr>
<td>6</td>
<td>Hong Kong, S.A.R., China</td>
<td>19.81</td>
<td>20.07</td>
<td>22.23</td>
<td>22.35</td>
<td>23.12</td>
</tr>
<tr>
<td>7</td>
<td>Guangzhou Harbor, China</td>
<td>18.85</td>
<td>17.22</td>
<td>16.16</td>
<td>16.31</td>
<td>14.74</td>
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<tr>
<td>20*</td>
<td>Keltin Ports, Japan</td>
<td>7.61</td>
<td>7.52</td>
<td>7.85</td>
<td>7.81</td>
<td>7.85</td>
</tr>
<tr>
<td>21</td>
<td>Laem Chabang, Thailand</td>
<td>7.22</td>
<td>6.82</td>
<td>6.58</td>
<td>6.04</td>
<td>5.93</td>
</tr>
<tr>
<td>22</td>
<td>Long Beach, U.S.A.</td>
<td>6.80</td>
<td>7.19</td>
<td>6.82</td>
<td>6.73</td>
<td>6.05</td>
</tr>
<tr>
<td>23</td>
<td>New York-New Jersey, U.S.A.</td>
<td>6.25</td>
<td>6.37</td>
<td>5.77</td>
<td>5.47</td>
<td>5.53</td>
</tr>
</tbody>
</table>


![Fig. 3 Waterside lines in Tokyo Bay and number of incoming and outgoing vessels](http://www.worldshipping.org/about-the-industry/global-trade/top-50-world-container-ports)
PROCESS...

• Industrial specialization in SF Bay Area over time (1990-2015)

Port economy, industrial economy, service economy and innovation economy

http://www.vitalsigns.mtc.ca.gov/jobs-industry
## COMPARISON OF MAJOR BAY AREAS

### Table 2 — World Major Bay Areas Comparison (2016)

| Bay Area | Guangdong-Hong Kong-Macao | Tokyo | New York | Osaka
|----------|---------------------------|-------|----------|--------
| Population (Million) | 6.774 | 4.396 | 2.015 | 0.761
| Area (Square Miles) | 5.6 | 3.65 | 2.15 | 1.79
| GDP (Billion USD) | 1.39 | 1.86 | 1.68 | 0.78
| Per Capita GDP (USD) | 2.05 | 4.27 | 8.22 | 10.17
| Container Capacity (Million TEU) | 6,264.2 | 772.5 | 625.2 | 237
| Air Passenger Traffic (Million) | 1.86 | 1.17 | 1.3 | 0.76
| Third Sector Ratio (%) | 62.2% | 82.3% | 83.4% | 82.8%

### Characteristics

- **Guangdong-Hong Kong-Macao Bay Area**: Economically the most developed and densely populated region, with a large port cluster and airport cluster. It is the core of China's technology and finance center.
- **Tokyo**: By artificial planning, the densely populated area concentrated the entire population of Japan; the largest industrial city in China; and the international financial center. It is the home of a large number of multinational companies and is known as the "Financial District".
- **New York**: Known as the "Financial Capital", it is the home of many international financial institutions such as banks, securities, futures exchange, and insurance.
- **Osaka**: Known as the "Saidai-bu", it is the home of a large number of multinational companies and is known as "Osaka Bay".

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*(1) Only includes Shenzhen, Hong Kong, and Guangzhou.*

*(2) 2014 data.*

Data Sources:
- Guangdong Statistics (2017)
- Guangzhou Statistics (2017)
- National Statistics (2017)
- Shenzhen Statistics (2017)
- Macau Statistics (2017)
- Tokyo Statistics (2017)
- New York Statistics (2017)
- Osaka Statistics (2017)
- United States Census Bureau (2017)
- Bureau of Economic Analysis (2017)
- Port of Oakland (2017)
- Fortune (2017)
- Z/Yen (2017)
UNDERSTANDING ‘BAY AREA’ USING GEOGRAPHICAL PERSPECTIVES

• Regional development

• Polycentricity (functional and geographical)

• Infrastructure and development (Ports, rails and internal connections)

• Commuting movement

• Migration

• And many other geographical perspectives…