HKEPC
Labor Force Crisis
## Executive Summary

### Background Information
- High housing price
- Lack of technology industry
- Low fertility rate
- Aging Population

### Solutions

**Short Run**
- Enhance WFH working mode
- GBA economic integration

**Long Run**
- Increase childcare facilities
- Cross border educational programs

### Impact
- **Social**
  - Solve labor crisis problem
- **World**
  - Redistribute labor resource
- **Firms**
  - Reduced operating costs
- **Families**
  - Higher quality of life, better education for children

### Future Prospects
- Improved hardware support
  - Eg: 5G telecom stations, faster internet connectivity
- Improve quality of labour force through educational programs and exchange of talent pool
High rent for both domestic and commercial land blocks overseas talents and businesses out of HK, GBA has issued policies and created science parks to support technology innovations.

**High Housing Price**

Hong Kong has the least affordable housing market in the world

### Housing Affordability Ratings by Nation: Totals by Market

<table>
<thead>
<tr>
<th>Nation</th>
<th>Affordable (3.0 &amp;Under)</th>
<th>Moderately Unaffordable (3.1-4.0)</th>
<th>Severely Unaffordable (4.1-5.0)</th>
<th>Severely Unaffordable (5.1 &amp;Over)</th>
<th>Total</th>
<th>Median by Nation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>8.2</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>China (Hong Kong)</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>18.8</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>10.8</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>23</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>0</td>
<td>12</td>
<td>18</td>
<td>26</td>
<td>56</td>
<td>5.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0</td>
<td>13</td>
<td>29</td>
<td>52</td>
<td>94</td>
<td>5.3</td>
</tr>
</tbody>
</table>

- **Reason for high property price**
  - Policies that higher rental price
  - Lack of land resources supply

**Lack of Technology Companies**

Technology is not one of the 5 pillar industry of HK’s economy

Absence of technology industry will lead to reliance on the traditional industries, especially housing and property industry.

Technology industry development can:
- Increase diversity of the economy
- Create more positions

The Greater Bay Area is supportive of tech innovations

### Supporting Policies

- Rental subsidies
- Training subsidies
- Incubation subsidies

### Tech Sites

1+12+N: Guangdong as the leading center, 12 sites as the example area

- Guangzhou Nansha
- Shenzhen Qianhai
- Zuhai Hengqin
Decrease in fertility rate lowers future workforce population, higher proportion of elderly create burden for tax payers as the government expenditure increase.

The replacement level of a population is 2.1 children per woman. An abnormally low fertility reduces the future workforce population and adds huge burden to existing labor force.

The median age and proportion of elderly in Hong Kong has been increasing rapidly in the past decades. This increases government expenditure and adds burden to existing tax payers.
From the perspective of both education and work, we offer the following solutions to ease the Labor crisis in Hong Kong.

### Labor Crisis mitigation?

#### Short term effects

**Employment**
- **Integrate resources from the GBA**
  - Encourage MNCs to enter HK and GBA market
  - Support the implementation of tech startups.
- **Open work from home job positions**
  - Expand the talent recruitment globally
  - Address the local issues of high housing and living costs to attract more potential talents work for Hong Kong

**Education**
- **Enhance Childcare Facilities**
  - Reduces the burden of parents, Increases incentives for childbirth
- **Enroll overseas middle school students**
  - Select the world’s outstanding students, accumulate local talent reserve resources
- **Cooperative school-running programs & sponsor exchange programs**
  - Optimize teaching resources and improve education level

### Long term effects

**Employment**
- **Enhance Childcare Facilities**
- **Enroll overseas middle school students**
- **Cooperative school-running programs & sponsor exchange programs**
- **Sponsor more exchange programs**
- **Open work from home job positions**
- **Address the local issues of high housing and living costs to attract more potential talents work for Hong Kong**

**Education**
- **Increase water level**
  - Enroll overseas middle school students
- **Increase water quality**
  - Develop cooperative school-running programs
  - Sponsor more exchange programs

### Water tank model

- **Increase inflow, reduce outflow**
  - Open work from home job positions
  - Enhance Childcare Facilities
- **Increase water level**
  - Enroll overseas middle school students
- **Increase water quality**
  - Develop cooperative school-running programs
  - Sponsor more exchange programs

**Hong Kong Student Pool**
- Enroll overseas middle school students
- Develop cooperative school-running programs
- Sponsor exchange programs

**Hong Kong Talent Pool**
- Talents will enter HK talent pool in future
- Open work from home job positions
- Attract tech companies locate in Hong Kong
- Support tech startups

**Expand water tank capability**
- Increase water level: Enroll overseas middle school students
- Increase water quality: Sponsor more exchange programs

Reduces the burden of parents, Increases incentives for childbirth
Open work from home positions, recruit talent globally, relieve the burden of high housing price in HK, rising costs of office space and huge cost in commuting.

### Job seekers express a strong demand to WFH
- **Hope to WFH**
  - 57%
- **Prefer 1-3 days WFH per week**
  - 27%
- **No need WFH but require more flexible working hours**
  - 16%

### We already have the capability to work remotely at scale
- **Hardware**
  - IDC
  - Server
  - Internet
  - Terminal
- **Software**
  - Zoom
  - Slack
  - OneDrive

### Different modes of WFH
- **Purely telecommuting**
  - For professionals in certain area locate globally:
    - Work remotely
    - Communicate with colleges online

### Tech-industry offered the largest proportion of WFH job positions in 2019-2021

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT/telecommunication/Electric/I</td>
<td>42%</td>
</tr>
<tr>
<td>Internet</td>
<td></td>
</tr>
<tr>
<td>Business service</td>
<td>13%</td>
</tr>
<tr>
<td>Others</td>
<td>9%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>9%</td>
</tr>
<tr>
<td>Retail/Wholesale/Trade</td>
<td>8%</td>
</tr>
<tr>
<td>Finance</td>
<td>8%</td>
</tr>
<tr>
<td>Cultural/Entertainment/ Media/</td>
<td>6%</td>
</tr>
<tr>
<td>Sports</td>
<td></td>
</tr>
<tr>
<td>Real estate</td>
<td>5%</td>
</tr>
</tbody>
</table>

### Hybrid Work Model
- **Jobs require teamwork:**
  - Live in the GBA
  - Meetup in Hong Kong office regularly

Source: Zhaopin

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Tech-industry is the focus to develop in Hong Kong.
Integrate resources from the GBA, encourage international MNCs enter the HK and GBA market, support the implementation of HK based tech startups, to create more positions.

Despite of the number of patents and the fine investment environment, HK lack the implementation of these tech innovations due to the high operation cost. HK based startups can create synergy by leveraging the resources in the GBA.

Accelerate infrastructure (Airports, ports, roads, etc) development to facilitate innovation factor exchange across border.

Lower tax and provide subsidies for foreign/GBA companies to enter HK.

Promote the convergence of rules and mechanisms in key areas to reduce friction for Tech MNCs to enter the HK and GBA market.

Diversify the listing standard for GEM board.

Share talent pool among HK and GBA area which expands the options for labor force.

- Policies supporting entrepreneurship
- Extensive Supply Chain
- Manufacturing industries
- Massive market access
- Policies supporting entrepreneurship
- Yet to commercialized patents and innovations
- Diverse international investment environment
- Mature service industry

Entrance of Tech MNCs can expand labor pool

- Brings in foreign experts to HK and GBA
- Create more positions that attracts talents to stay.

HK based start-ups with GBA office can create more value for HK office.
Enhance Childcare Facilities for kindergarten and lower primary students, provide convenient for working class parents, reduce reluctance for childbirth.

**Current situation**

**Lack** of childcare facilities

1. Government subsidized childcare facilities are severely lacking
2. In 2017, only 40,000 spaces available in government operated facilities
3. Huge deterrent to parents for raising a child. Do not know how to take care of children while at work
4. Housing constraints mean that employing domestic worker is not feasible

**Improvement**

1. Increase number of government subsidized childcare facilities
2. Introduce post school childcare centres for kindergarten and lower primary school students
3. Kindergarten: Offer childcare services after school in the morning or afternoon until 7pm
4. Lower Primary: Offer childcare services from 3pm to 7pm

*Parents pick them up after work*

**Reduces** burden of parents, **Increase** incentives for childbirth
Address on middle school student pool expansion, attract talents from diverse background to create global talent pool and balance education resources in long run.

**Enroll overseas middle school students**
- Policy incentive: Subsidies on living expenses, tuition fee and flight ticket
- Condition: Applier needs to stay in HK for further study or submit liquidated damages
- Process: Certification test – audition - English bridging courses

**Cooperative school-running programs**
- Encourage middle school cooperate school running across boarder
- Increase combined master and PHD program in STEM
- 2+2 mode for bachelor degree

**Sponsor exchange programs/internship program**
- Encourage exchange in GBA for both middle schools and universities
- Subsidies on exchange living expenses
- Cross border internship
- Involve students in government’s innovative industrial projects

**Focal Point**
- **Lower pressure**: Incentivize international talents by subsidizing living expenditure.
- **Directed training**: Train STEM experts by providing combined Master & PHD program.
- **STEM Focused**: Increase the proportion of students in STEM industry.
- **Cross-border opportunities**: Access to opportunities in multiple regions with freedom.
### Impact on HK society and the world

**Impact on Hong Kong**

<table>
<thead>
<tr>
<th>Labor</th>
<th>Society</th>
<th>Environment</th>
<th>Governance</th>
</tr>
</thead>
</table>
| • Transform population structure, prevent aging
  • Reduce brain drain, introducing advanced technology
  • Enhance education levels, boost overall strength for the future | • Reduce living stress, improve mental health state, increase happiness index
  • Increase economic income
  • Increase employment rates | • Reduce commuting, conserve energy and reduce emission
  • Paperless online office is more environmentally friendly | • Redistribute global labor resources
  • Providing equal opportunities for women in areas such as India where female unemployment rates higher than male |

**Impact to the world**
### Impact on firms and individual families

<table>
<thead>
<tr>
<th>Costs</th>
<th>Talent</th>
<th>Costs</th>
<th>Well being</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save on rent. Reduced size of physical office with more work done remotely</td>
<td>Increase number of job opportunities in Hong Kong Replenish labor force in Hong Kong to maintain its competitiveness</td>
<td>Reduce transportation costs Government subsidies from talent program Improved quality of education with cultural exchange between GBA and HK</td>
<td>Easier to raise child with increased childcare facilities Enjoy better quality of life. Reduced mental burden. Can focus on work while taking care of child</td>
</tr>
</tbody>
</table>
Changing age structure of labor force may lead to decrease in fiscal income and increase in expenditure, contributing to high risk in budget constraint.

<table>
<thead>
<tr>
<th>Impact</th>
<th>Catastrophic</th>
<th>Significant</th>
<th>Moderate</th>
<th>Low</th>
<th>Negligible</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<td>20</td>
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<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Improbable</th>
<th>Remote</th>
<th>Occasional</th>
<th>Probable</th>
<th>Frequent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Policy ineffectiveness</td>
<td>Test with a few successful points then promote to broader area.</td>
</tr>
<tr>
<td>Mismatch between policies and the actual needs</td>
<td></td>
</tr>
<tr>
<td>2. Quality control</td>
<td>Make use of blockchain technology to obtain feedback on company performance.</td>
</tr>
<tr>
<td>Difficult to monitor the outcome</td>
<td></td>
</tr>
<tr>
<td>3. Low ROI</td>
<td>Long term result will be higher as the sites creates agglomeration effect.</td>
</tr>
<tr>
<td>Return might not cover investment</td>
<td></td>
</tr>
<tr>
<td>4. Budget constraint</td>
<td>Modify fiscal structures in SR, in LR the rise of tech industry contribute to higher revenue.</td>
</tr>
<tr>
<td>Decrease in fiscal income and increase in fiscal expenditure</td>
<td></td>
</tr>
<tr>
<td>5. Environmental and political risk</td>
<td>Comply with local ESG regulations and policies; sign agreements to promote communication and collaboration among regional governments.</td>
</tr>
<tr>
<td>Change in government policies and geopolitical relationships</td>
<td></td>
</tr>
</tbody>
</table>
Future Prospective: Integrate global labor and education resources, establish the world talent bank and the world education resource bank, provide sustainable power for development of HK.

Establish the World Talent Bank
Redistribute world labor resources

Software development:
Web 3.0 online office, development of AI

Hardware development:
5G, Cloud computing, development of computing power

Establish the World Education Resource Bank
Integrate global education resources, Break the border of education

Teaching model innovation:
Web 3.0 online classroom, cross-border teachers’ cooperative teaching

Teaching team cooperation:
Virtual collective to prepare a lesson with teacher from different areas