

# HONG KONG PUBLIC OPINION RESEARCH INSTITUTE

## Post-Epidemic Work Resumption Index (PEWRI)

### Explanatory Notes

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#### 1. Preamble

As the coronavirus epidemic in Hong Kong subsides, people begin to discuss under what conditions should everyday life go back to normal, probably starting from one's work life first, then move onto one's non-work life which may be split on the personal, family, community and societal levels.

While it is the government's responsibility to decide what policies to take in helping society recover after the epidemic, we at the Hong Kong Public Opinion Research Institute (HKPORI) consider it important to gauge people's views in this aspect in a timely manner to facilitate rational deliberation based on scientific evidence. This paper describes the construction and application of a "Post-Epidemic Work Resumption Index" (PEWRI, 疫後復工指數) based on opinion data gathered from scientific surveys conducted by the Hong Kong Public Opinion Program (HKPOP) of HKPORI.

Once PEWRI is well established, similar indexes like "Post-Epidemic Business Resumption Index" (PEBRI, 疫後復業指數), "Post-Epidemic School Resumption Index" (PESRI, 疫後復課指數), "Post-Epidemic Examination Resumption Index" (PEERI, 疫後復考指數), "Post-Epidemic Gathering Resumption Index" (PEGRI, 疫後復聚指數), and so on can be constructed using similar designs.

#### 2. Conceptual Framework

The main objective of PEWRI is to find an "acceptable" level of risk whereby the public considers it reasonable to resume working after the epidemic. Using Hong Kong's social hierarchy as the discussion framework, there can be "vertical" differences in risk perceptions and appraisals by government officials, health experts, economists, key opinion leaders, employers, employees, and so on, while on the "horizontal" axis, different economic sectors, like white versus blue collars, primary versus secondary versus tertiary sectors, wholesale versus retail sectors, public versus private sectors, teachers versus parents versus students, and so on may also have very different views. There can therefore be different PEWRIs for different social groups in the social matrix, which can make the situation very complicated. This paper tries to avoid these complications by generating indicators at two simple levels, namely, a population-based work resumption indicator and some sector-based work resumption indicators, which can be combined in a simple way to produce a PEWRI for each sector. This methodology will make applications simple.

Because no sector in our society exists in isolation, so unless there are good reasons for individual sectors to deviate significantly from others in terms of post-epidemic work resumption, it is better for all sectors to act together collectively. Thus, in the absence of specific sector-based PEWRIs, the population-based PEWRI should prevail.

### **3. Research Design and Data Collection**

Having considered all the pros and cons, the HKPOP Team considers it good enough to use just one key opinion question to construct one population-based and some sector-based work resumption indicators, which would be used to construct different PEWRIs for different sectors. The key question is this:

**Key question: When do you think is the appropriate time to resume normal work after the epidemic?** Answer options are arranged in gradation of “safety levels” like this:

- 1) Number of recovered cases exceeds newly confirmed cases each day
- 2) Number of newly confirmed cases each day falls to a single digit
- 3) No more newly confirmed local case
- 4) No more newly confirmed local or imported case
- 5) No more newly confirmed case in 7 consecutive days
- 6) No more newly confirmed case in 14 consecutive days
- 7) No more newly confirmed case in 28 consecutive days

In the above example, those choosing the most stringent condition, say, option 7, would be taken to have agreed to all options 1~7, while those choosing 6 would be taken to have agreed to 1~6, those choosing 5 would be taken to have agreed to 1~5, and so on. The scale can be further refined to include more in-between options.

After a survey, all options which receive over 50% support are considered to be “acceptable” by the respondents, and the “acceptable” option at the lowest “safety level” is projected to be the threshold of “people’s acceptance”. Because some respondents may not give definite answers (like those who would answer “don’t know or hard to say”, or give other vague answers), the raw percentages should therefore be re-based to include definite answers only.

Once an over-50% threshold is located, be it for the general population or for a specific sector, its “acceptance level” can be further tested by another independent opinion question (possibly in another survey) like this:

**Supplementary question:** There is a view in the society that if [a named threshold] happens, we can go back to work as normal. How much do you agree or disagree with this view?

- Very much agree
- Somewhat agree
- Half-half
- Somewhat disagree
- Very much disagree
- Don’t know / hard to say

Running a survey using the supplementary question(s) is optional, it only tests the respondents' agreement to a social norm which may or may not be what one has advocated. It can be taken as a simple consistency check.

Because the validity and usefulness of all opinion surveys are affected by their research method, sampling size, timeliness and other considerations, HKPOP recommends these standards in generating PEWRIs: For generating population-based figures, random surveys of over 1,000 samples should be used, while for sector-based figures, their sub-sample size should be over 500 subjects. If a sector has too small a sample base, it should either be enhanced with more survey samples or be combined with other sectors to become a bigger group. For this reason, HKPOP has only generated a PEWRI for "the working population".

When a rolling survey design is adopted, HKPOP recommends setting population-based samples at 1,000+ and sector-based samples at 500+ and then aggregate the daily data backward day by day up to the point when both criteria mentioned are fulfilled. This would enable sufficient sample for meaningful analysis without losing data freshness.

#### 4. Latest Findings by HKPOP

In order to construct the PEWRI described in this paper, a pilot study was conducted by HKPOP from 7 April to 20 April 2020 and the following results have been obtained:

<b>When do you think is the appropriate time to resume normal work after the epidemic? (General population, N=910)</b>				
Raw %	Acc %	Re-based %	Acc %*	Labels
5.0	5.0	5.4	5.4	Number of recovered cases exceeds newly confirmed cases each day
18.1	23.1	19.5	24.9	Number of newly confirmed cases each day falls to a single digit
17.0	40.1	18.4	43.2	No more newly confirmed local case
11.7	51.8	12.6	<b>55.8</b>	<b>No more newly confirmed local or imported case**</b>
41.0	92.8	44.2	<b>100.0</b>	<b>No more newly confirmed case in 14 consecutive days**</b>
4.1	96.9	-	-	Don't know / hard to say
3.1	100.0	-	-	Other
T=100.0		T=100.0		
* Also taken as scores of population-based "work resumption indicators"				
** "Acceptable items" since indicator scores over 50				

<b>When do you think is the appropriate time to resume normal work after the epidemic? (Sector = working population, N=589)</b>				
Raw %	Acc %	Re-based %	Acc %*	Labels
3.9	3.9	4.1	4.1	Number of recovered cases exceeds newly confirmed cases each day
20.4	24.3	21.5	25.6	Number of newly confirmed cases each day falls to a single digit
12.5	36.8	13.2	38.8	No more newly confirmed local case
6.5	43.3	6.9	45.7	No more newly confirmed local or imported case
51.6	94.9	54.3	<b>100.0</b>	<b>No more newly confirmed case in 14 consecutive days**</b>
3.0	97.8	-	-	Don't know / hard to say

2.2	100.0	-	-	Other
T=100.0		T=100.0		
* Also taken as scores of sector-based “work resumption indicators”				
** “Acceptable items” since indicator scores over 50				

Having worked out the population-based work resumption indicator and the working population sector-based work resumption indicator, the PEWRI for the sector is calculated simply by taking the average of the scores. That means equal weight is given to the general population and a specific sector, and it should be noted in this pilot study, the working population sector is actually a subset of the general population. In future studies, especially for small sectors where booster samples may be needed, the sector sub-samples need not overlap with the general population sample.

<b>PEWRI for the working population</b>			
WR pop-indicator	WR sector-indicator	PEWRI	Labels
5.4	4.1	4.8	Number of recovered cases exceeds newly confirmed cases each day
24.9	25.6	25.2	Number of newly confirmed cases each day falls to a single digit
43.2	38.8	41.0	No more newly confirmed local case
55.8	45.7	<b>50.7</b>	<b>No more newly confirmed local or imported case**</b>
100.0	100.0	<b>100.0</b>	<b>No more newly confirmed case in 14 consecutive days**</b>
** “Acceptable items” since index scores over 50			

## 5. Recommendation

The pilot study conducted by HKPORI mainly on “work resumption” and using “working population” as the reference group shows that the latest PEWRI score for “no more newly confirmed local or imported case” is 50.7 – meaning that the working population is willing to resume working as normal once there is no more newly confirmed case in a certain day. It so happened that Hong Kong has zero cases yesterday (April 20), so in case this condition continues for some time (like a few days), the government should start to lift its ban on work-related activities both on the public and private sectors.

### Notes of caution

- (a) All PEWRIs are indices based on public perception which itself may be subjective and irrational but is nevertheless an important part of social reality.
- (b) The key expression in PEWRI surveys is “resume normal work after the epidemic”, but exactly what constitutes “normal” is open to interpretation. It can be argued that wearing masks at work or during commutation may be seen as “not yet normal”. Even flexi-hour work and/or service arrangements may be seen as “not normal”. In this paper, it is assumed that the main difference between “normal” and “not normal” is the existence of government bans on certain commercial activities and the closure of certain public facilities. If and when needed, the wording of PEWRI survey questions can be refined to pin down the meaning of “normality”.