"One Country Two Systems" Overview: Public Survey and Index Construction
Second Report

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Part I: Summary

In our first Report on the "One Country Two Systems" (henceforth 1C2S) released at the 20th anniversary of HK's return to China, we constructed an Index (henceforth the Index) to provide an objective assessment on the implementation of 1C2S in Hong Kong. The Index is derived as the average of the following two indices:

1) Index (A), an index of HK Public's Evaluation of 1C2S: Compiled from a telephone poll conducted in mid-2017 on various dimensions of 1C2S, and
2) Index (B), the Freedom and Democracy Index, which is obtained from indices of international think tanks.

In this second Report, we have:

- Conducted a second telephone poll in December 2017 with a refined questionnaire to compile Index (A), and
- Updated Index (B) with international data to reflect conditions in 2016 (Due to the long time lag in collecting international data, most of the data of international indices used in the First Report only reflected conditions in 2014).
- Launched a new 1C2S Mass Media Index (MMI) that use big-data techniques to measure the sentiment of Hong Kong newspapers towards 1C2S from 1988 to the end of 2017 as news sentiment has very significant influences on public opinion.

In the second Report, the scores (on a scale of 0 to 10) of Index (A) and (B) are **4.98** and **8.04** respectively. The updated Index, which is the average of the Indices (A) and (B), is **6.51**. This score is not directly comparable with the Index in the first Report due to the refinement of methodology in the second Report. We can nevertheless compute the Index according to comparable methodology, and the scores of the Index in the first and second rounds should respectively be **6.46** and **6.44**. The Index has fallen by a negligible 0.02 or 0.3% in the last six months.

Going forward, for the reference of policy makers and the public, we will update and refine the Index every half year through conducting a public survey and updating international indices, and also updating the MMI to gauge the latest sentiments of the media.

A. Change in scores in the two rounds

Changes in scores in the Index may be affected by the controversial political events that occurred between the two rounds:

- Disqualification of four LegCo members by the High Court,

- Prison sentences on the (13 + 3) protesters: 13 protestors in the East North Territories Development clash, and the trio (Joshua Wong, Nathan Law, and Alex Chow) in the Civic Square clash,
- Emphasis on "overall jurisdiction over Hong Kong" in the Work Report of 19th CPC National Congress,
- Amendment of the Rules of Procedure of the Legislative Council to restrict filibustering,
- China's enactment of the national anthem law, and
- Legco's passage of the non-binding motion on co-location arrangement.

The above events may have adversely affected the evaluations of 1C2S by the public and also by international think tanks. In the second survey, we have introduced questions on the majority of the above issues to gauge public's reactions.

(1) Index (A): Public's evaluation of 1C2S

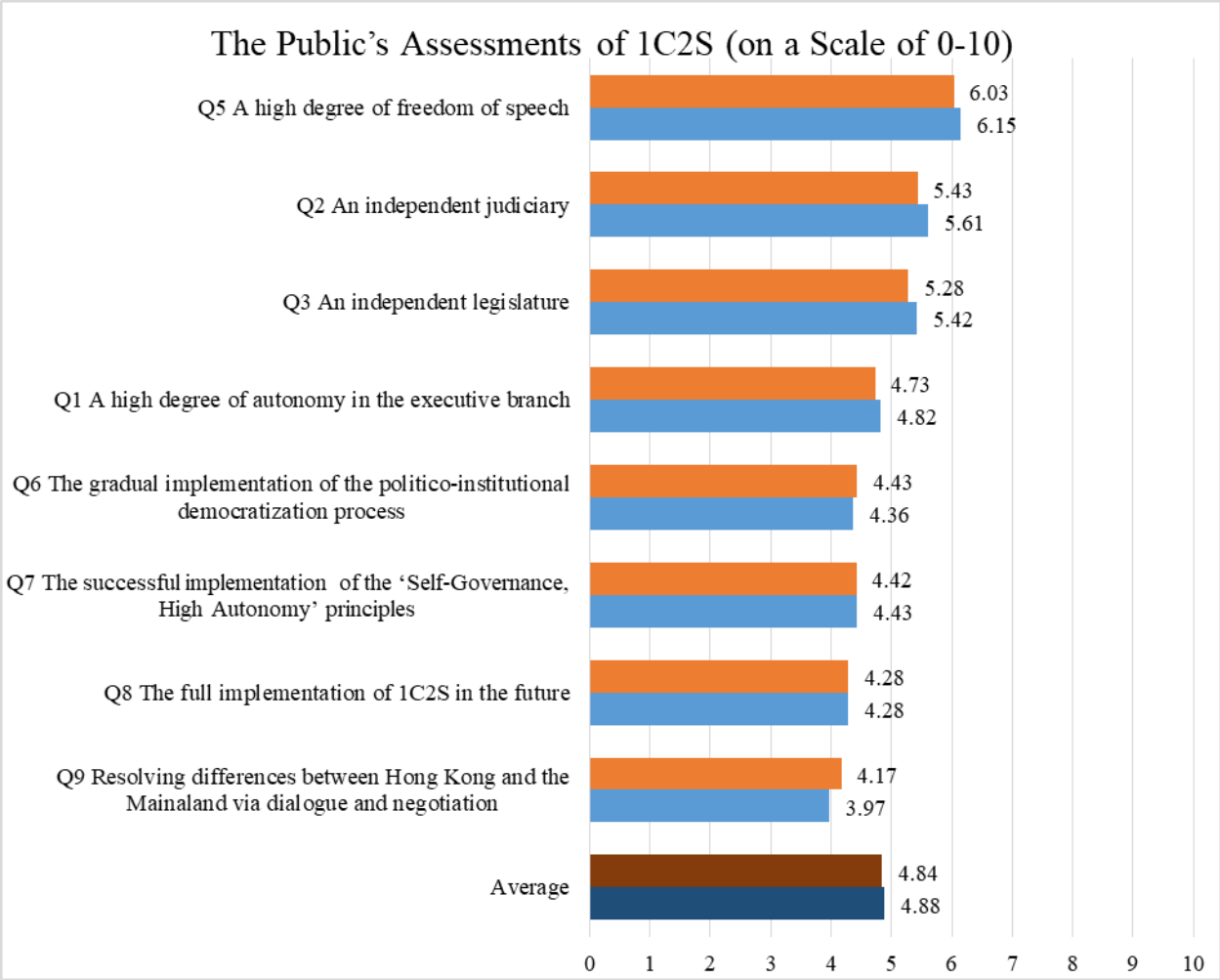
Due to the refinement of survey questions in the survey, the Index (A) is not directly comparable with that in the first survey. The refinement only affects one question in the 9 questions used to compute the index, and scores of the other eight questions are directly comparable as they are identical in the two surveys.

In the eight questions that are identical in both rounds of surveys, the scores of 5 questions have fallen: A high degree of autonomy in the executive branch, judiciary independence, legislative independence, freedom of speech, and the successful implementation of "Self Governance, High Autonomy" principles. In view of the above political controversies, the fall of these 5 scores is not surprising.

The scores of two questions have increased, namely "resolving differences between Hong Kong and the Mainland via dialogue and negotiation", and "the gradual implementation of institutional democratization process". The scores of these two questions might have been positively affected by the efforts of Mrs. Carrie Lam to heal societal divisions.

Comparing the two rounds, the average score of the eight questions have fallen from **4.88** in the first survey to **4.84** in the second survey, falling by a negligible 0.04 or 0.8%. Given the many controversies that happened between the two rounds of surveys, the very slight deterioration of Index (A) is unexpected. It is likely that this can partly be attributed to the improvement in political climate under the new administration of Carrie Lam.

Fig 1: Public's Assessments of 1C2S (Comparison of Two Rounds of Survey)



(2) <u>Index (B) – Freedom and Democracy Index</u>

Index (B) is the average of 3 indices, namely, the Economic Freedom Index and Personal Freedom Index of CATO-Fraser Institutes, and the Democracy Index of the EIU (Economic Intelligence Unit). Hong Kong has always ranked world's number one in Economic Freedom, and has also ranked highly in Personal Freedom.

The latest Economic Freedom and Personal Freedom indices only reflect conditions up to 2015. We updated both indices to 2016 according to the methodology of CATO-Fraser Institutes. Hong Kong's Personal Freedom Index rose from 2008 to a peak in 2014, but fell thereafter. The Democracy Index rose from 2008 to a peak in 2015, but declined thereafter. Given the adverse international reactions to recent political controversies in Hong Kong, the recent declines are expected.

- The Personal Freedom Index climbed from **8.87** in 2008 to a peak of **9.08** in 2014, but fell to **8.62** in 2016, falling by 5.1% from the 2014 peak. Among the 7 sub-indices of this Index, the scores of 4 sub-indices fell, namely, rule of law (falling by 8.5%), freedom of religion (falling by 7.4%), freedom of association (falling by 22%), and gender identity & relationship (falling by 7.5%).

- Despite these declines from 2014 to 2016, Hong Kong's score in Personal Freedom is still decent, close to those of neighboring developed countries/territories such as Japan, Taiwan, South Korea, and Singapore. This is testament to Hong Kong's preservation of high levels of human rights and personal freedoms under 1C2S.

- Hong Kong's Democracy Index rose from **5.85** in 2008 to a peak of **6.50** in 2015, and rank from the 84th to the 67th. This may be due to the increase in the number of directly elected seats in the Legislature. However, the score fell slightly to **6.42** in 2016, and fell further to **6.31** in 2017. Hong Kong's scores were lower than those of Japan, Taiwan, and South Korea, but was close to that of Singapore. Hong Kong's mediocre ranking is expected given that the Chief Executive is not elected by universal suffrage.

Our indices are only updated to 2016 due to data limitations, and complete 2017 data on Index (B) – the Freedom and Democracy Index, are not yet available. However, partial 2017 data is available. The Democracy Index, which has 1/3weight in Index (B), has declined by 1.7% in 2017. In the same year, Hong Kong's score in the Freedom of the World Report of the Freedom House fell from 61 to 59, declining by 1.7%. The Freedom of the World Index is less comprehensive than our Index (B) as it ignores economic freedom completely and focuses mostly on personal freedom. Nevertheless, this implies that Hong Kong's Personal Freedom Index would likely fall as well.

According to the Economic Freedom Index of Heritage Foundation, which is very similar to that of CATO-Fraser Institutes, Hong Kong's Economic Freedom Index has risen by 0.45% in 2017. However, the small rise in Hong Kong's Economic Freedom Index is likely to be more than offset by the fall in the Democracy Index and the Personal Freedom Index. Index (B) will likely fall further in 2017, showing that international think tanks are highly concerned about personal freedom and democracy in Hong Kong.

In 2017, while international opinions on Hong Kong have turned negative, opinions of the Hong Kong public on 1C2S have improved. Our two surveys only cover the second half of 2017 and cannot show trends before mid-2017. The HKU Public Opinion Programme (HKUPOP) has quarterly surveys on public's confidence on 1C2S starting from 1993. The average *net percentage* of the public who have confidence in 1C2S (percentage of the public that is confident less the percentage of the public that is not confident) in the four surveys in 2016 was negative 1.5%. The average *net percentage* in the four surveys in 2017 was +4.6%. From 2016 to 2017, the *net percentage* of the public who have confidence in 1C2S has risen by 6.1 percentage points.

Our 1C2S MMI (Mass Media Index) has also improved substantially in 2017. The MMI score has risen from 84 in December 2016 to 97 in December 2017, an increase of 15.6%. The strong

improvement in media sentiment appears to be related to the change in Hong Kong's CE (Chief Executive). Mr. C.Y. Leung, the former CE, announced in December 2016 that he would not seek re-election. Mrs. Carrie Lam, the new CE, was elected in late March 2017 and she started her new term on 1st July 2017. In our second survey, we also asked the public about her new administration, and the opinion is positive.

The reason for the divergence between international and local opinions appears to be that the Hong Kong public has placed a lot of weight on the change of CE, while international think tanks have mostly neglected the change. This divergence underlines the importance of including the opinions of both the Hong Kong public and international think tanks in a balanced index of 1C2S.

B. Topical questions in the telephone survey

(1) Topical questions asked in both surveys

- When conflicts arise in 1C2S, a majority believes that the Central Government and Hong Kong are equally responsible, which reflects the need for both parties to reconsider their own obligations and positions.

- The percentage of the public who plans to emigrate due to lack of confidence in 1C2S has fallen from 9.4% in the first round to 7.7% in the second round. This is a positive development.

- Both rounds of surveys indicate that the public remains deeply divided over whether the current government ought to initiate public consultation for Article 23 legislation. The absence of consensus should be a cause for concern to policy makers.

(2) Topical questions in the 2nd survey on controversial political events between the two rounds

- Hong Kong people are worried about the emphasis of the Central Government on "overall jurisdiction over Hong Kong" in the Work Report of 19th CPC National Congress: 45.0% indicate that they are worried or very worried that the Central Government will tighten its policy towards Hong Kong; only 30.2% indicate that they are unworried or very unworried.

- Public opinion on amendment of the Rules of Procedure of the Legislative Council to restrict filibustering is positive: 43.5% indicate agree or strongly agree; only 32.9% indicate disagree or strongly disagree.

- Public opinion on appointment of Carrie Lam as CE is positive: 49.0% indicate that social divisions remain unchanged; 41.0% indicate that they have decreased; only 7.6% indicated that they have increased.

- Public opinion on the Government proposal of 'co-location arrangement' for the Express Rail Link is positive: 49.5% indicate support or strongly support; only 22.6% indicate oppose or strongly oppose.

- Public opinion on the impact of 'co-location' arrangement on 1C2S is neutral: 48.9% indicate no impact, 31.5% indicate negative impact, only 13.6% indicate positive impact.

- Impact of enactment of national anthem law by the Hong Kong government on 1C2S is negative: 42.7% indicate negative impact; 34.3% indicate no impact; only 16.3% indicate positive impact.

Despite worries about the tightening of the Central Government's policy towards Hong Kong and the enactment of the national anthem law, Hong Kong people appear to be very pragmatic in the reaction to recent controversies. They appear to place efficiency of operating the Express Rail Link over political concerns on whether the "co-location arrangement" would infringe the Basic Law. They value effective functioning of the LegCo over endless debates. They also have a positive view of Carrie Lam, who set aside political controversies on constitutional reforms and focus on improving people's livelihood. This pragmatic approach is consistent with the negligible change in the people's evaluation of 1C2S despite the many political shocks that happened between the two surveys. This pragmatism may also explain the slight rise in public's confidence that conflicts between mainland China and Hong Kong can be resolved via dialogue and negotiation (question 9 of survey).

C. Citizen's Self-Identification as Hong Kongers and as Chinese

(1) Double identity as 'Hong Konger' and 'Chinese'

- In both rounds of surveys, a majority of the public (55.9% in the first round and 56.1% in the second round) strongly identify themselves as both 'Hong Kongers' and 'Chinese'. On a scale of 0 to 10, the public's self-identifications as 'Hong Kongers' and as 'Chinese' have both increased in the last half year, rising from respectively 7.75 and 6.63 in mid-2017 to respectively 7.93 and 6.71 at the end of 2017.

- In both rounds of surveys, there is a significant positive correlation between the two identities –the more strongly one is identified with 'Hong Konger', the more strongly one is identified with 'Chinese'; the converse also holds. This is a favourable condition for the implementation of 1C2S.

- As double identity as 'Hong Konger' and 'Chinese' is the norm in Hong Kong, traditional surveys (e.g., those of the HKU Public Opinion Programme) that compel interviewees to choose between two identities ('Hong Konger' and 'Chinese') or choose one among four identities ('Hong Konger', 'Hong Kong Chinese', 'Chinese Hong Konger', and 'Chinese') are misleading as they implicitly put the 'Hong Konger' and 'Chinese' identity as mutually exclusive. Traditional surveys cannot reveal a situation in which the strength of both identities has increased, as they have in the last half year.

(2) Identity as Chinese across different groups

- In the second survey, all age groups (18 years to over 70 years old), and also all groups by educational attainment (from primary level to graduate school), have relatively strong identity as "Chinese", with ratings above the median. In comparison with the first survey, the identity as "Chinese" of the majority of age groups (including Young Adults), and of the majority of groups by educational attainment, have both increased.

- Pro-establishment supporters and Moderates identify themselves strongly as "Chinese". The strength of their identification has also increased in the last half year.

- Though the strength of identification of Pan-Democrats as "Chinese" is slightly above the median, the strength of their identification has fallen. Localists/Self-determinists have relatively weak identity as "Chinese" and the strength of their identification has also fallen in the last half year. The self-identity as "Chinese" of Pan-Democrats and Localists/Self-determinists (23% of our sample) are moving further away from that of the majority. This is a cause for concern.

- Though the identity of Young Adults (18 to 29 years old) as "Chinese" has strengthened slightly in the last half year; it is only marginally above the median. Policy makers need to work hard to cultivate national identity among Young Adults.

D. 1C2S MMI (Mass Media Index)

- By surveying over 123,000 news articles and 61 million words from 20 local daily newspapers, 1C2S MMI monitors how "1C2S" is conveyed in the mass media. The MMI complements our 1C2S Index as media sentiment is an important factor in the formation of public opinion.

- In the longer run, subject to resource availability, the MMI opens up many opportunities of further research in public opinion formation. The MMI can be compiled at high frequency intervals (e.g. monthly) as it is not subject to the long time lags of surveys. It is also possible to investigate the effect of specific significant events (e.g., co-location arrangement for the Express Rail link) on media sentiment, or to compare sentiments in the local and overseas media.

- The base month of 1C2S is set at July 2017, the 20th anniversary of the HKSAR. We compiled the MMI from Aril 1998 to December 2017. The overall trend of MMI is compared to two well-known opinion polls on public's views towards 1C2S, namely, the polls of RTHK and HKU Public Opinion Programme. The trend of the MMI is similar to that of the two polls: Rising in the early 2000's to a peak around 2007, then falling to a trough around 2014-16 with Occupy Central and the civil unrest in Mongkok, then recovering thereafter.

- The recent trend of MMI correlates quite closely with significant events. In particular, the MMI dropped sharply by over 20 points from December 2016 to June 2017 when the "Causeway Bay Bookstore" incident and the civil unrest in Mong Kok aroused widespread concern. However, the MMI bottomed out in July 2016, and has risen strongly since December 2017, when CY Leung declared that he would not run for a second term. This rise was further boosted in 2017 when Carrie Lam was elected CE. The MMI rose by a total of 24 points from the nadir of July 2016.

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Part II: Main Report

I. **1C2S Overview: Telephone Survey**

II. **Index (B): International Freedom and Democracy Indices**

III. **Constructing the Index**

IV. **1C2S MMI (Mass Media Index)**

I. 1C2S Overview: Telephone Survey

In order to fully access the public's assessment of 1C2S, we commissioned the Hong Kong Institute of Asia-Pacific Studies of the Chinese University of Hong Kong to conduct a telephone survey from December 11 to 23 in 2017. 1,006 individuals were successfully and randomly sampled, all aged 18 or above; all of them spoke either Cantonese or Mandarin (the sampling error is ±3.09% within a 95% confidence level); the response rate was 39.5%, satisfying both statistical and scientific standards. For a more extensive report on the survey results, please see Appendix 2 on the homepage of the Path of Democracy.

Rating Scales:

The survey employed 1 to 7 as the rating scale in the data collection process, with 4 as the median; this scale is commonly adopted for most psychological assessments. During the actual surveying process, this scale was used instead of a 0 to 10 scale as the latter is deemed too finely graduated and cumbersome for respondents to choose from. For statistical analysis, we continue to employ the 1 to 7 scale. However, to better conform with existing indices – which tend to be expressed on a 0 to 10 scale (with 5 as the median) – we converted the results into the 0 to 10 scale for index compilation purposes.

Comparing the two rounds of surveys:

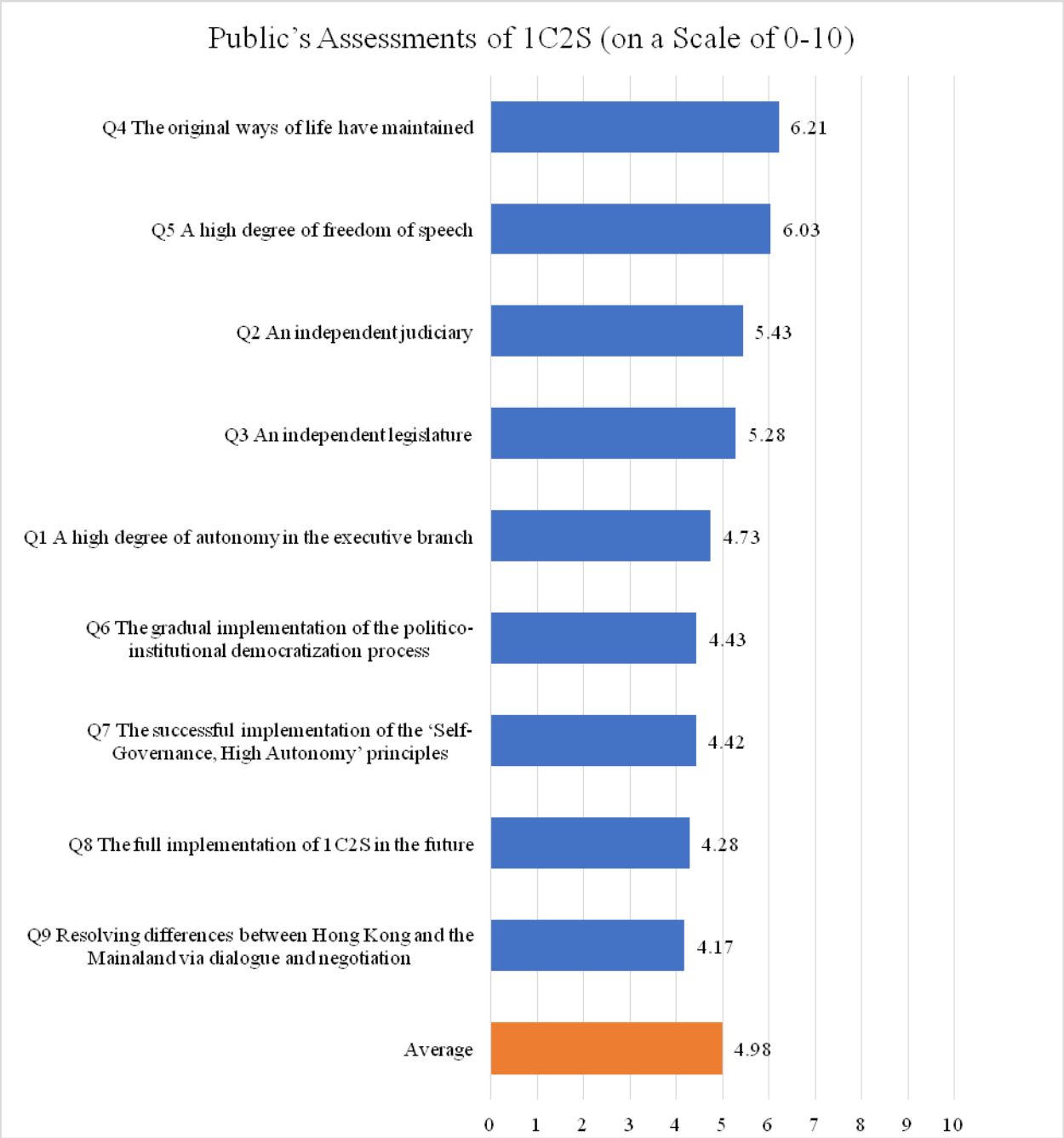
There are many changes in the results of the two rounds of surveys. However, most changes are not substantial enough to be statistically significant. In this Report, the few changes that are statistically significant will be marked with a " * ". Other changes that are statistically insignificant will not be marked.

Summary of Key Survey Findings:

1) <u>Citizens' Assessment of 1C2S's Current State (Survey Questions 1-9)</u>

We surveyed the public's assessments of nine specific items concerning 1C2S; see Figure 2 for detailed results. Amongst the nine items, four items scored higher than 5; from the highest to the lowest, they are: maintaining original ways of life (6.21), freedom of speech (6.03), judicial independence (5.43), legislative independence (5.28) – these results suggest the public hold relatively positive opinions with respect to the above four items.

Fig. 2: Public's Assessments of 1C2S (Valid Sample Size: 918)



On the other hand, five items score below 5: they are, from the highest to lowest, a high degree of autonomy in the executive branch (4.73), progress in democratization (4.43), the successful implementation of "Self Governance, High Autonomy" principles (4.42), the full implementation of 1C2S in the future (4.28), and the ability for the Mainland and Hong Kong to resolve differences via dialogue and negotiation (4.17). The results suggest that the public holds relatively negative views with respect to these five items. The average across the ten items is 4.98, just short of the half way mark, indicating that the public does not give a high rating to 1C2S, a fact which policy makers ought to be aware.

The range of the ratings is relatively narrow (the lowest rating is 4.17; the highest, 6.21), most plausibly because the public generally hold a 'holistic rating' on 1C2S, such that regardless of the specific item surveyed, the answers are nevertheless shaped by their 'holistic ratings', such that the range across their answers for each specific item is relatively small.

(2) Comparing results of two rounds of surveys

The first round survey has ten questions on 1C2S. Eight questions were framed positively (e.g., after the handover, Hong Kong has been able to maintain independent judiciary powers, maintain independent legislative power, continues to enjoy freedom of speech etc.), but the following two questions were framed negatively:

a) "After the handover, the way of life of the Hong Kong people has not been affected by mainland China. To what extent would you agree?"
b) "After the handover, the internal affairs of Hong Kong have not been interfered with by the central and local governments of China. To what extent would you agree?"

Questions framed negatively are more difficult to understand. Moreover, the standard deviations of the above two questions were 1.85 and 1.82 respectively, which were higher than those of the other eight questions (ranging from 1.64 to 1.77). This indicates that the design of the above two questions needs to be improved.

To improve our questionnaire, we made two changes in the second round survey. Firstly, we changed the framing of question (a) from negative to positive ("After the handover, Hong Kong people has been able to maintain their original way of life"). Secondly, we deleted question (b) as it largely overlapped with other questions (e.g., after the handover, Hong Kong has been able to maintain independent judiciary powers; maintain independent legislative power; continues to enjoy freedom of speech; has been able to practice a high degree of autonomy etc.).

Due to the above changes, when we compare the results of the two surveys, we can only compare the results of the eight questions that are identical across the two rounds. Table 1 shows the results of the comparison. It also shows the effects on the average scores when questions (a) and (b) are included or excluded as the case may be.

Table 1: Public's Assessments of 1C2S (Comparison of Two Rounds of Survey)

		Average (0-10)	
		2017.6	2017.12
1	After the handover, Hong Kong has been able to practice a high degree of autonomy, and has been able to handle its own internal administrative affairs. To what extent would you agree?	4.82	4.73
2	After the handover, Hong Kong has been able to maintain independent judiciary powers. To what extent would you agree?	5.61	5.43
3	After the handover, Hong Kong has been able to maintain independent legislative powers. To what extent would you agree?	5.42	5.28
5	After the handover, Hong Kong continues to enjoy the freedom of speech. To what extent would you agree?	6.15	6.03
6	After the handover, the development of Hong Kong's democratic system has been progressively implemented, following the provision of the Basic Law. To what extent would you agree?	4.36	4.43
7	Twenty years after the handover, how successful has been the practice of 'Hong Kong people administering Hong Kong with a high degree of autonomy'?	4.43	4.42
8	How confident are you in the full implementation of 'one country, two systems' in Hong Kong in the future (before 2047)?	4.28	4.28
9	When conflicts between mainland China and Hong Kong arise, how confident are you that the conflicts can be resolved through consultation and dialogue?	3.97	4.17
	Average	**4.88**	**4.84**
4	After the handover, the original ways of life of the Hong Kong people have maintained. To what extent would you agree?	-	6.21
	Average	-	**4.98**
A	After the handover, the way of life of the Hong Kong people has not been affected by mainland China. To what extent would you agree?	5.12	-
B	After the handover, the internal affairs of Hong Kong have not been interfered with by the central and local governments of China. To what extent would you agree?	4.26	-
	Average	**4.84**	-

In the eight questions that are identical in both rounds, the scores of 5 questions have fallen: A high degree of autonomy in the executive branch, judiciary independence, legislative

independence, freedom of speech, and the successful implementation of "Self Governance, High Autonomy" principles. The scores might have been affected by recent political controversies.

However, the scores of two questions have increased, namely "resolving differences between Hong Kong and the Mainland via dialogue and negotiation", and "the gradual implementation of institutional democratization process". The scores of these two questions might have been positively affected by the efforts of Mrs. Carrie Lam to heal societal divisions.

The average score of the eight questions have fallen from 4.88 in the first survey to 4.84 in the second survey, falling by a negligible 0.04 or 0.8%.

(3) Citizens' Self-Identification as Hong Kongers and as Chinese (Questions 12 - 13)

We respectively surveyed how citizens identify themselves, whether as 'Hong Kongers' or 'Chinese', or both (Table 2).

On the whole, the public identified themselves strongly as 'Hong Kongers', with an average of 5.76 on the 1 to 7 scale (and therefore 7.93 on the 0 to 10 scale). The public also identified themselves reasonably strongly as 'Chinese', with an average of 5 on the 1 to 7 scale, and 6.71 on the 0 to 10 scale.

Table 2: Public's identification as 'Hong Konger' and 'Chinese' (Comparison of Two Rounds of Survey)

	Respondents		Average (1-7)		Average (0-10)	
	2017.6	2017.12	2017.6	2017.12	2017.6	2017.12
"I am a Hong Konger"	979	986	5.65	5.76	7.75	7.93
"I am a Chinese"	979	986	4.96	5.00	6.63	6.71

The extent to which the public identified themselves as 'Hong Konger' and 'Chinese' can be better denoted by a scatter plot. The x-axis in Figure 3 constitutes the strength of self-identification as a Hong Konger; the y-axis, self-identification as Chinese. On the 1 to 7 scale, the median is 4, which indicates a moderate level of identification. Ratings that are higher than 4 indicate relatively strong identification; ratings that are lower than 4 indicate relatively weak identification. Fig. 1 suggests that a plurality of citizens identify themselves strongly as both Hong Kongers and Chinese, with 213 individuals selecting 7 for both categories (21.6% of the total).

Fig. 3: Scatter Plot for Citizens' Self-identification (Valid Sample Size: 986)

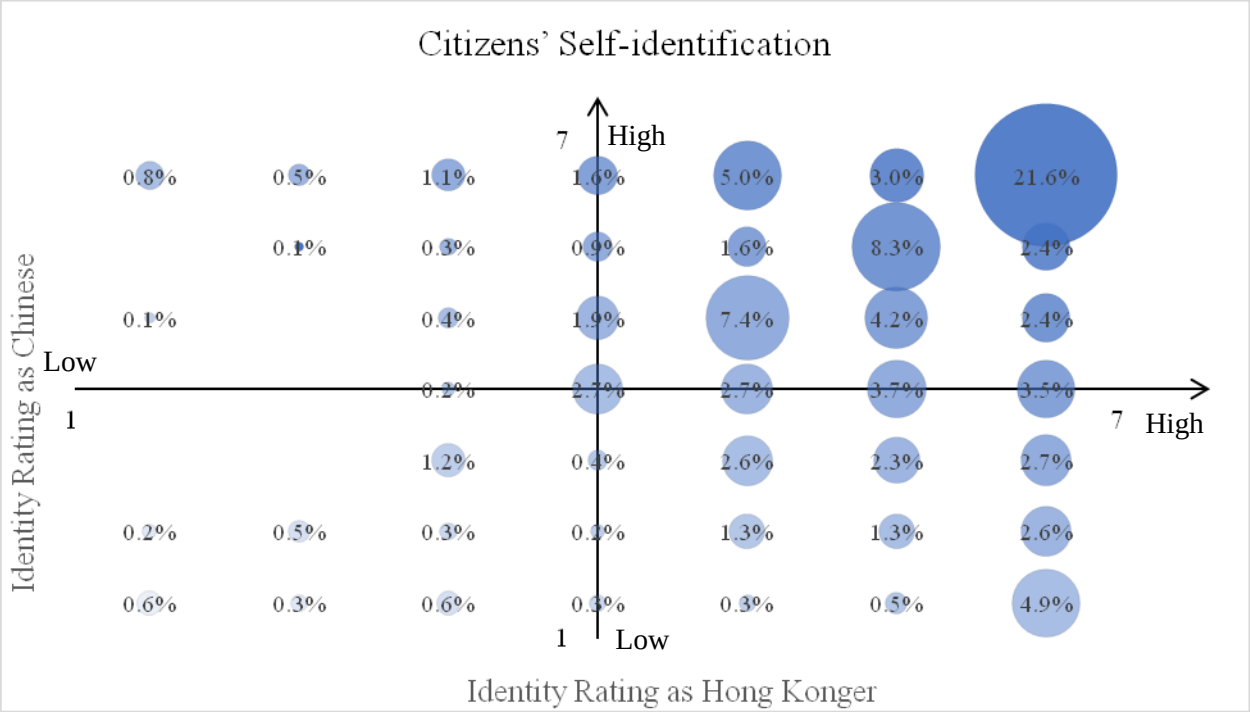
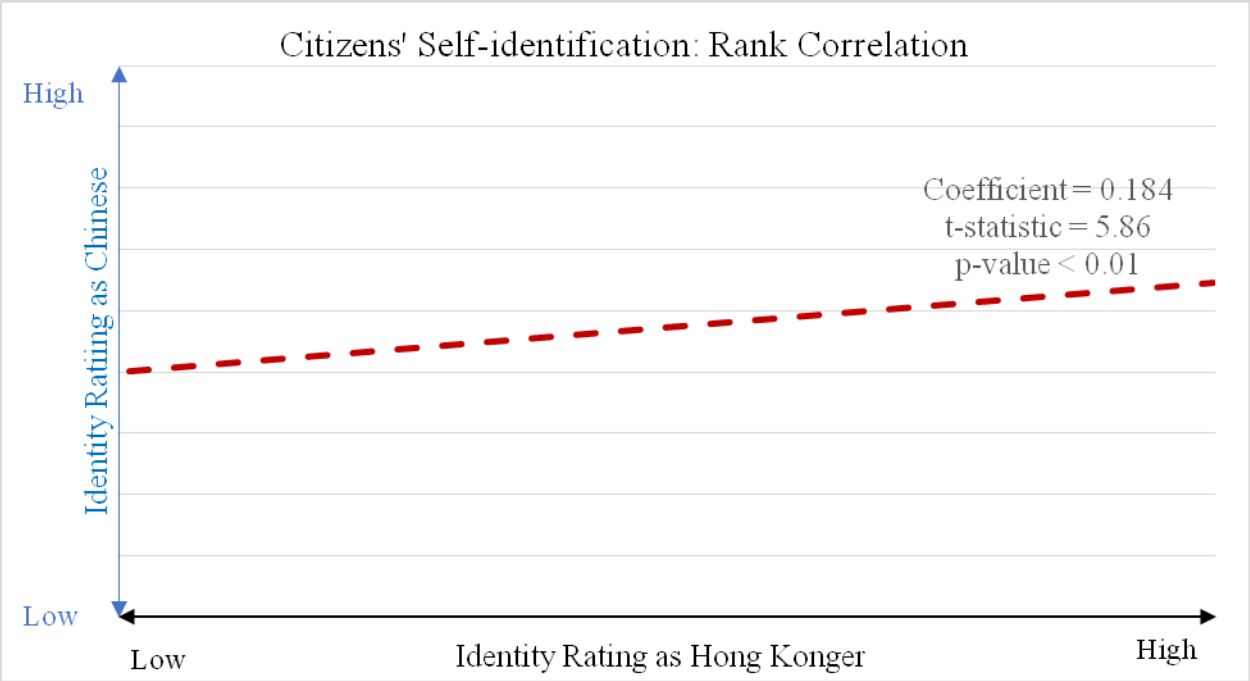


Fig. 3 clearly depicts that most Hong Kong citizens are cognizant of their double identities as both Hong Kongers and Chinese; 553 individuals hold relatively strong levels of identification as both Hong Kongers and Chinese (56.1% of the total). Identification as Chinese may not be the same as "devotion to China", but identification as both Chinese and Hong Kongers is a pre-requisite for "devotion to China and Hong Kong". The fact that a majority of Hong Kong people identify themselves as both "Hong Konger" and "Chinese" provides a strong basis for implementation of 1C2S.

Statistical analysis yields the observation that there exists a significant positive correlation between identification as a Hong Konger and identification as Chinese, suggesting that the more strongly one identifies with Hong Kong, the more strongly one also identifies with China (see Figure 4). The converse also holds. The rank correlation coefficient is 0.184 and is statistically very significant at the 99.9% confidence level, which is similar to the first survey where the corresponding coefficient was highly significant at 0.132. The finding that the two identities as "Hong Konger" and "Chinese" are mutually reinforcing each other again provides a strong basis for the implementation of 1C2S.

Fig. 4: Rank correlation of Citizens' Self-identification (Valid Sample Size: 986)



(4) <u>Survey Design: Comparison with Other Public Surveys</u>

The University of Hong Kong (HKU), and the Chinese University of Hong Kong (CUHK) have the following three well-known programmes that track the self-identification of the Hong Kong public with longitudinal surveys:

i. The HKU Public Opinion Programme (HKUPOP) has surveyed the self-identification of the Hong Kong public since 1997;
ii. The CUHK Center for Communication and Public Opinion Survey has carried out similar surveys since 1996;
iii. The Centre for Social and Political Development Studies, HK Institute of Asia-Pacific Studies, CUHK has conducted similar surveys since 1998.

The results of these three studies have been widely quoted by scholars and the press in Hong Kong.

In the past, the first two studies have classified the public's self-identification into four categories, namely 'Hong Konger', 'Hong Kong Chinese', 'Chinese Hong Konger' and 'Chinese', while the third study has classified the public's self-identification into two categories, namely 'Hong Konger' and 'Chinese'. Such classifications implicitly put the 'Hong Konger' and 'Chinese' identities as mutually exclusive, implying that the more strongly one identifies himself as 'Hong Konger', the less strongly one identifies himself as 'Chinese'. Our research and analysis suggests that in reality, the contrary holds. Many citizens identify themselves strongly as both 'Hong Kongers' and 'Chinese' – to ask that citizens choose one amongst the four categories (or one amongst the two categories) above can easily lead to bias.

The above three studies are designed to identify the primary identification of interviewees. However, if interviewees identify equally strongly (or equally weakly) as both 'Hong Kongers' and 'Chinese', compelling them to choose one over another would give misleading results. Figure 1 shows that 41.7% of the public have equally strong identification with both identities. Moreover, in the scatter plot, the 3 largest groups are those giving equally high scores of 5 or 6 or 7 as to both identities. The 3 groups together account for 37.3% of our sample.

Besides possible bias, the above questionnaire designs also do not allow researchers to answer the following two important questions on identity raised in this study:

i. What is the proportion of the public that strongly (or relatively strongly) identify themselves as both 'Hong Konger' and 'Chinese'?
ii. Is the identification with 'Hong Konger' and with 'Chinese' correlated?

Our survey finds that, in the last half year, the public have identified themselves more strongly as "Hongkonger" and also as "Chinese". On the other hand, HKUPOP finds that the strength of identities goes in opposite directions: Identity as "Hongkonger" has strengthened as identity as "Chinese" has weakened. This is because HKUPOP assumes that the two identities are mutually exclusive and compels respondents to choose one identity over the other: If respondents identify more with "Hongkongers", they must identify less with "Chinese". Such a questionnaire design can produce highly biased results.

Over recent years, HKUPOP has also acknowledged the fact that bias is likely to occur when requesting interviewees to select one amongst the four categories above. Indeed, in its news release at the end of 2016, the programme admits that: "the concepts of "Hongkongers", "Hongkongers in China", "Chinese" and "Chinese in Hong Kong" may overlap with each other, and making a one-in-four choice may not reflect the actual strengths of one's ethnic identities". Since June 2007, the Public Opinion Programme has incorporated separate questions that seek to identify specifically the strengths of citizens' identification with 'Hong Konger' and 'Chinese', using methods that are similar to those adopted by this study. However, the other two surveys have yet to carry out a similar revision – there is thus obvious room for improvement. Lastly, though the HKUPOP has added separate questions on identity since 2007, it has not released any analysis of the above two questions based on its data.

(5) <u>Identity as "Chinese" across groups by age, by educational attainment, and by political inclination: Comparison of two rounds of surveys</u>

Table 3 compares the self-identity as "Chinese" across groups by age, by educational attainment, and by political inclination in the two rounds of surveys. In the second survey, all age groups (18 years to over 70 years old), and also all groups by educational attainment (from primary level to graduate school), have relatively strong identity as "Chinese", with ratings above the median of 4. In comparison with the first survey, the identity as "Chinese" of the majority of age groups (including Young Adults), and of the majority of groups by educational attainment, have both increased.

Table 3: Self-identity as "Chinese" of Groups by Age, by Education, and by Political Inclination: Comparison of Two Rounds of Surveys

		Respondents		Share		Average (1-7)	
		2017.6	2017.12	2017.6	2017.12	2017.6	2017.12
All Respondents		979	986	100%	100%	4.96	5.00
Age	18-29	176	169	18.0%	17.2%	3.97	4.04
	30-39	165	166	16.9%	16.9%	4.54	4.77
	40-49	173	173	17.7%	17.6%	5.05	4.92
	50-59	204	201	20.8%	20.4%	5.25	5.29
	60-69	141	147	14.4%	15.0%	5.44	5.54
	70 or Above	120	127	12.3%	12.9%	5.83	5.66
Educational Attainment	Primary or Below	124	121	12.7%	12.3%	5.65	5.80
	Secondary (F.1 - F.3)	117	121	12.0%	12.3%	5.37	5.54
	Secondary (F.4 - F.7)	293	295	30.1%	30.1%	5.08	4.93
	Non-degree tertiary	115	116	11.8%	11.8%	4.64	4.89
	Bachelor's degree	271	274	27.8%	28.0%	4.42	4.51
	Postgraduate degree	55	53	5.6%	5.4%	5.24	4.92
Political Inclination	Pro-establishment *	98	96	10.4%	10.5%	6.33	6.65
	Moderates	568	591	60.6%	64.4%	5.16	5.26
	Pro-democrats *	208	199	22.2%	21.7%	4.43	4.09
	Localists and Self-determinists	64	32	6.8%	3.5%	3.00	2.84

* The change in self-identification is statistically significant at the 95% confidence interval.

Traditional surveys found that only seniors, or the less educated, or Pro-establishment supporters have relatively strong identity as "Chinese". Our survey found that all age groups and also all groups by educational attainment have relatively strong identity as "Chinese".
For groups identified by political inclination, Pro-establishment supporters and Moderates identify themselves strongly as "Chinese". The strength of their identification has also increased in the last half year. The increase in the strength of identity of Pro-establishment supporters is statistically significant at the 95% level. Though the strength of identification of Pan-Democrats as "Chinese" is slightly above the median of 4 in the second survey, the strength of their identification has fallen, and the decrease is statistically significant at the 95% level. Localists/Self-determinists have relatively weak identity as "Chinese", with a rating of around 3. The strength of their identification has also fallen in the last half year.

Moderates are the mainstream of society (65% of our sample in the second survey). The increase in the strength of identity as "Chinese" of the public reflects the trend of Moderates and Pro-establishment supporters. However, the self-identity as "Chinese" of Pan-Democrats and Localists/Self-determinists (23% of our sample) are moving further and further away from that of the majority. This is a cause for concern.

Though the identity of Young Adults (18 to 29 years old) as "Chinese" has strengthened slightly in the last half year; it is only marginally above the median of 4. Policy makers need to work hard to cultivate national identity among Young Adults. Young Adults' identification as "Chinese" appears to be deeply polarized – 40% identify themselves relatively strongly as Chinese (above 4); 39% identify themselves relatively weakly (below 4), with the remaining 21% identifying themselves moderately so.

(6) Knowledge of Basic Law (Question 11)

Though the public's self-rating (on a scale of 1 to 10) of its familiarity with the Basic Law has increased slightly from 4.45 in the first survey to 4.53 in the second survey, the rating is still below the median of 5, indicating that the public's knowledge of Basic Law is inadequate.

(7) Whose Responsibility Is It When Conflicts Arise between Hong Kong and the Mainland? (Question 14)

When asked to allocate blame between Central Government and Hong Kong when conflicts arise in the implementation of 1C2S, a declining majority (declining from 58% to 52.4% in the last half year) of the public selected "Equally Responsible", as per Table 4. In this survey, the respective numbers of individuals who held that the responsibility lay with the Mainland or Hong Kong were roughly comparable (respectively 26.4% and 21.3%). The corresponding numbers are higher than those in the first survey (respectively 25.4% and 16.6%). In other words, more people are blaming either the Central Government or Hong Kong, indicating that public opinions are moving towards polarization. This is a worrying trend.

Table 4: Responsibility for Conflict between Hong Kong and the Mainland

	Respondents		Mainland is Responsible		Both are Equally Responsible		Hong Kong is Responsible		Total
	2017.6	2017.12	2017.6	2017.12	2017.6	2017.12	2017.6	2017.12	
Pro-establishment	93	89	5.4%	0.0%	34.4%	29.2%	60.2%	70.8%	100%
Moderates	546	571	18.1%	20.3%	65.9%	60.8%	15.9%	18.9%	100%
Pro-democrats, localists and self-determinists	271	224	46.9%	52.2%	50.2%	42.6%	3.0%	7.6%	100%
Total	910	884	25.4%	26.4%	58.0%	52.4%	16.6%	21.3%	100%

A rising majority of Pro-Establishment supporters (rising from 60.2% to 70.8% in the last half year) held that the responsibility primarily lay with Hong Kong. However, a rising share of Pan-Democrats and Localists/Self-determinists (rising from 46.9% to 52.2%) believe that the responsibility lay mostly with Mainland China. The opinions of the two camps are polarizing.

Amongst moderates and independents, a declining majority (declining from 65.9% to 60.8% in the last half year) held that both parties were equally to blame. In this survey, the respective numbers of individuals who held that the responsibility lay with Mainland or Hong Kong were roughly comparable (respectively 20.3% and 18.9%). The corresponding numbers are slightly higher than those in the first survey (respectively 18.1% and 15.9%). This shows opinions within Moderates are also polarizing.

The results suggest that both the Central Government and Hong Kong ought to reflect on its own responsibility for deadlocks and conflicts between the two.

(8) Emigration and Confidence in 1C2S（Q21、Q22）

In Table 5, 7.7% of the public indicate that they have plans to emigrate due to their lack of confidence in 1C2S. This ratio is lower than 9.4% in the first survey, and this is an encouraging development. Among Moderates, the ratio of those who plan to emigrate due to their lack of confidence in 1C2S has declined from 9.4% to 5.9% in the last half year, which is also encouraging. However, among the pan-democrats, localists and self-determinists (25% of our sample), the ratio of those who plan to emigrate due to their lack of confidence in 1C2S has increased from 13.9% to 15.7% in the last half year. Their attitude is diverging from those of Moderates (65% of our sample) and the general public.

Table 5: Citizens' Emigration Plans due to the Lack of Confidence in 1C2S

	Respondents		Due to the Lack of Confidence in 1C2S	
	2017.6	2017.12	2017.6	2017.12
Pro-establishment	100	96	1.0%	0
Moderates	583	596	7.9%	5.9%
Pro-democrats, localists and self-determinists	274	229	13.9%	15.7%
Total	957	921	9.4%	7.7%

Among those who plan to emigrate due to their lack of confidence in 1C2S, 49.3% were moderates (slightly lower than 52.3% in the first survey), and 50.7% was non-establishment supporters (slightly higher than 46% in the first survey).

Past studies have suggested that surveys often inaccurately amplify the number of individuals who seek to emigrate, for only a fraction of those who express interest in emigrating eventually do so in reality – as such, caution should be exercised in interpreting the findings, though they still provide valuable reference of the degree and extent of concern. Amongst the moderates, those who confess to having plans to emigrate due to their lack of confidence in 1C2S may do so due to – on one hand – their disillusionment towards the Central Government and the Pro-Establishment, but also – on the other – disillusionment towards perceived instability instigated by the "Yellow Ribbons"; the latter may cause disaffection amongst the moderates due to the perceived damage of radical politics on the rule of law and Hong Kong's economy. Neither of the possibilities above could be ruled out.

(9) Attitudes towards Article 23 Public Consultation (Q10)

Table 6 shows that, on the scale of 1 to 7, the opinions of whether the government should initiate public consultation for Article 23 legislation are clearly divided, with 18.6% (16.1% in the first survey) selecting 1 ("very unnecessary"), and 17.7% (15.5% in the first survey) opting for 7 ("very necessary").

The reason for such polarization plausibly is due to the fact that a considerable proportion of the public is strongly opposed to having Article 23 legislated at all, and hence is opposed to any consultation, whilst those in favour hold that – given the inevitability of Article 23's legislation under the Basic Law, it is marginally better to have at least some consultation, as opposed to none.

Compared with moderates or independents, pro-establishment voters are more inclined towards "very necessary", whilst pan-democrats, localist and self- determinists are more inclined towards "very unnecessary". Amongst samples that explicitly state their political stance, 58.4% (53.9% in the first survey) of those who answered "very unnecessary" were moderates, whilst 57.5% (60% in the first survey) of those who answered "very necessary" were also moderates – constituting roughly the same proportion in both extremes. With regards to public consultation on Article 23 legislation, moderates – as with the wider Hong Kong public – remain deeply divided. In view of this, policy makers should exercise caution in approaching this subject.

Table 6: Attitudes towards Article 23 Public Consultation

	Pro-establishment		Moderates		Pro-democrats, Localists and Self-Determinists	
	2017.6	2017.12	2017.6	2017.12	2017.6	2017.12
N	95	93	551	574	263	224
1	3.2%	7.5%	15.1%	16.9%	25.9%	26.8%
2	6.3%	6.5%	10.3%	13.4%	22.4%	24.6%
3	10.5%	7.5%	18.9%	13.1%	16.0%	9.5%
4	12.6%	7.5%	15.2%	16.0%	11.0%	12.1%
5	15.8%	19.4%	12.9%	17.4%	6.5%	8.2%
6	21.1%	9.7%	10.7%	7.3%	5.7%	3.5%
7	30.5%	47.9%	16.9%	15.9%	12.5%	12.1%
Average	5.17	4.55	4.00	4.25	3.17	2.99

(10) New Topics after the First Survey

After the first survey, some hot topics have arisen which may influence the public's assessment of 1C2S. In the second survey, we include below six new questions to collect the public's opinion:

1. The work report of 19th CPC National Congress states that the Central Government has "overall jurisdiction over Hong Kong", and will ensure that 'One Country, Two Systems' "will not change". Are you worried that the Central Government will tighten its policy towards Hong Kong? (Q15)

2. Recently some lawmakers motion for the amendment of the Rules of Procedure of the Legislative Council to restrict filibustering. Do you agree with this amendment? Do you strongly disagree, disagree, half-half, agree or strongly agree? (Q16)

3. Since Carrie Lam has been appointed CE, do you think societal division have increased, decreased or unchanged? (Q17)

4. The Government proposes 'co-location arrangement' for the Express Rail Link. Do you support this? (Q18)

5. Do you think the 'co-location arrangement' has positive, negative or no impact on 'One Country, Two Systems'? (Q19)

6. Do you think the enactment of the national anthem law by the Hong Kong government has positive, negative or no impact on 'One Country, Two Systems'? (Q20)

10.1 Public concern about the tightening of the Central Government's policy towards Hong Kong in the light of Work Report of 19th CPC National Congress（Q15）

Table 7 shows that among all the respondents, 45.0% are "worried" or "very worried" that the Central Government will tighten its policy towards Hong Kong, and only 30.2% select "unworried" or "very unworried". As expected, most of the pro-establishment supporters are "unworried" or "very unworried" (75.5%). Among moderates (64.8% of our sample), those who are "worried" or "very worried" constitute 38.2%, which is slightly higher than those who are "unworried" and "very unworried" (33.6%). On the whole, the public is worried about the tightening of the Central Government's policy towards Hong Kong in the light of Work Report of 19th CPC National Congress.

Table 7: Public concern about the tightening of the Central Government's policy towards Hong Kong in the light of Work Report of 19th CPC National Congress

	Respondents	Unworried/Very Unworried	Half-Half	Worried/Very Worried	Total
Pro-establishment	94	75.5%	18.1%	6.4%	100%
Moderates	595	33.6%	28.2%	38.2%	100%
Pro-democrats, localists and self-determinists	229	8.3%	16.7%	76.0%	100%
Subtotal	918	31.6%	24.1%	44.3%	100%
Total valid samples	989	30.2%	23.1%	45.0%	98.4%

10.2 Opinion on Amendment of the Rules of Procedure of the Legislative Council to Restrict Filibustering (Q16)

Table 8 shows 43.5% of the public "agree" or "strongly agree" amending the Rules of Procedures to restrict filibustering, and only 32.9% "disagree" or "strongly disagree". Most of the pro-establishment supporters (85.1%) "agree" or "strongly agree", while most (59.6%) non-establishment supporters "disagree" or "strongly disagree". Among the moderates (64.6% of our sample), 51% "agree" or "strongly agree", and only 25.9% "disagree" or "strongly disagree". On the whole, the public leans towards restricting filibustering.

Table 8: Opinion on Amendment of the Rules of Procedure of the Legislative Council to Restrict Filibustering

	Respondents	Disagree/Strongly Disagree	Half-Half	Agree/Strongly Agree	Total
Pro-establishment	94	7.4%	7.4%	85.1%	100%
Moderates	582	25.9%	23.0%	51.0%	100%
Pro-democrats, localists and self-determinists	225	59.6%	24.6%	17.8%	100%
Subtotal	901	32.4%	21.3%	46.3%	100%
Total valid samples	971	32.9%	20.5%	43.5%	96.8%

10.3 The Impact of Carrie's Lam's appointment as CE on Societal Division (Q17)

How does Carrie Lam's appointment as CE affect societal division? Among all the respondents (Table 9), 49.0% opt for "unchanged"; 41.0% opt for "decreased" and only 7.6% select

"increased". The majority of the pro-establishment supporters (63.2%) opt for "decrease" and only 2.1% select "increase". 51.9% of non-establishment opt for "unchanged"; 33.8% opt for "decreased", and only 14.3% selected "increased". Among moderates (64.3% of our sample), 52.7% opt for "unchanged"; 42.3% opt for "decreased" and only 4.9% selected "increased". On the whole, the public tend to think that the appointment of Carrie Lam as CE has decreased societal division.

Table 9: The Impact of Carrie's Lam's Appointment as CE on Societal Division

	Respondents	Increased	Unchanged	Decreased	Total
Pro-establishment	95	2.1%	34.7%	63.2%	100%
Moderates	586	4.9%	52.7%	42.3%	100%
Pro-democrats, localists and self-determinists	231	14.3%	51.9%	33.8%	100%
Subtotal	912	7.0%	50.7%	42.3%	100%
Total valid samples	982	7.6%	49.0%	41.0%	97.6%

10.4 Opinion on the 'co-location arrangement' for the Express Rail Link (Q18)

Table 10 shows that, 49.5% of the public "support" or "strongly support" the 'co-location arrangement' for the Express Rail Link. Only 22.6% "oppose" or "strongly oppose". Most of the pro-establishment supporters (86.6%) "support" or "strongly support" the 'co-location arrangement', and only 3.1% "oppose" or "strongly oppose". Among non-establishment supporters, 41.8% "oppose" or "strongly oppose", and only 27.1% "support" or "strongly support" the 'co-location arrangement'. Among moderates (64.3% of our sample), 55.8% "support" or "strongly support" the 'co-location arrangement', and only 17% "oppose" or "strongly oppose". A majority of the public supports the Government's proposal of 'co-location arrangement' on the Express Rail Link.

Table 10: Opinion on the 'co-location arrangement' for the Express Rail Link[#]

	Respondents	Oppose/ Strongly Oppose	Half-Half	Support/ Strongly Support	Total
Pro-establishment	97	3.1%	10.3%	86.6%	100%
Moderates	588	17.0%	27.2%	55.8%	100%
Pro-democrats, localists and self-determinists	225	41.8%	31.1%	27.1%	100%
Subtotal	910	21.6%	26.4%	52.0%	100%

Total valid samples	980	22.6%	47.9%	49.5%	97.4%

[#]The survey was concluded on 23 Dec 2017 and thus cannot reflect the controversy relating to the approval of the Co-operation Arrangement for the co-location arrangement by the NPC Standing Committee.

10.5 Impact of the 'co-location arrangement' for the Express Rail Link on 1C2S (Q19)

Table 11 shows that, 48.9% of the public thinks that there will be "no impact" of 'co-location arrangement' on 1C2S; 31.5% opt for "negative impact", and 13.6% opt for "positive impact". Most of the pro-establishment supporters opt for "no impact" (65.2%), and 32.6% opt for "positive impact". Among non-establishment voters, 56.1% opt for "negative impact", but 40.7% opt for "no impact".

Among the moderates (64.4% of our sample), 55% opt for "no impact"; 27.8% opt for "negative impact", and 17.2% opt for "positive impact". To conclude, most of the public do not think that the 'co-location arrangement' has any impact on 1C2S.

Table 11: Impact of the 'co-location arrangement' for the Express Rail Link on 1C2S[#]

	Respondents	Positive Impact	No Impact	Negative Impact	Total
Pro-establishment	92	32.6%	65.2%	2.2%	100%
Moderates	565	17.2%	55.0%	27.8%	100%
Pro-democrats, localists and self-determinists	221	3.2%	40.7%	56.1%	100%
Subtotal	878	15.3%	52.5%	32.2%	100%
Total valid samples	979	13.6%	48.9%	31.5%	94.0%

[#]The survey was concluded on 23 Dec 2017 and thus cannot reflect the controversy relating to the approval of the Co-operation Arrangement for the co-location arrangement by the NPC Standing Committee.

10.6 Impact of Enactment of the National Anthem Law by the Hong Kong Government on 1C2S (Q20)

Table 12 shows that 42.7% of the public believe enactment of the national anthem law will have a "negative impact" on 1C2S; 34.3% believe there will be "no impact", and 16.3% believe there will be "positive impact". Among pro-establishment supporters, 45.6% opted for "positive impact", which is slightly higher than those who opted for "no impact" -- 43.3%. Most of the non-establishment supporters (71.6%) opt for "negative impact", and only 25.3% select "no impact".

Table 12: Impact of Enactment of the National Anthem Law by the Hong Kong Government on 1C2S

	Respondents	Positive Impact	No Impact	Negative Impact	Total
Pro-establishment	90	45.6%	43.3%	11.1%	100%
Moderates	557	20.1%	41.1%	38.8%	100%
Pro-democrats, localists and self-determinists	225	3.1%	25.3%	71.6%	100%
Subtotal	872	18.3%	37.3%	44.4%	100%
Total valid samples	937	16.3%	34.3%	42.7%	93.3%

Among the moderates (63.9% of total), 41.1% opt for "no impact", 38.8% opt for "negative impact", and 20.1% select "positive impact". In conclusion, the public has a certain degree of worry on the enactment of the national anthem law.

(11) Summary of Opinion on New Topics

To summarize, the public has different attitudes towards the six new questions. The public is worried about the tightening of the Central Government's policy towards Hong Kong and the enactment of the national anthem law. These concerns may weaken the public's confidence in 1C2S.

On the other hand, the public supports the government's proposal of the "co-location arrangement" and thinks there will be no impact on 1C2S. Moreover, the public tends to agree with restricting filibustering in LegCo. They think that societal division have decreased after Carrie Lam's appointment as CE. These developments may strengthen public's confidence in 1C2S.

The average score of the eight questions on 1C2S is 4.88 in the first survey and 4.84 in the second survey. The score is largely unchanged, showing that the new topics do not affect the public's assessment decisively.

II. Index (B): International Freedom and Democracy Indices

Freedoms and democracy are core components of 1C2S; given the inevitable subjectivity in public polls, there exists important referential value in the more objective international indices. Index (B) is the average of 3 indices, namely, the Economic Freedom Index and Personal Freedom Index of CATO-Fraser Institutes, and the Democracy Index of the EIU (Economic Intelligence Unit). The average of the Economic Freedom and Personal Freedom Indices is known as the Human Freedom Index, which is the most comprehensive index of freedom available. Hong Kong has always ranked world's number one in Economic Freedom, and has also ranked highly in Personal Freedom. As a result, Hong Kong has also been world's number one in Human Freedom from 2008 to 2014.

Hong Kong's rank in the Democracy Index has been mediocre, behind Japan, Taiwan, and South Korea. This is expected as Hong Kong's Chief Executive is not elected by universal suffrage.

As Hong Kong is a highly developed region and given that highly developed regions tend to have comparatively higher Freedom and Democracy Indices as compared with developing regions – we have selected certain neighbouring developed countries and territories (namely, Japan, South Korea, Singapore, and Taiwan) as the benchmarks for comparison and assessment of Hong Kong's performance. We have also compared the respective scores of the Mainland and Hong Kong under the indices, so as to identify whether Hong Kong has become increasingly 'Mainlandised' under 1C2S. For brevity, we will refer to Japan, South Korea, Singapore, Taiwan, and the Chinese mainland as '**neighbouring territories**'.

As the Human Freedom Index covers a very large number of countries, there is a two-year time lag in data compilation. The 2016 Human Freedom Index used in our first report only reflects conditions in 2014. The newly released 2017 Human Freedom Index only reflects conditions in 2015. In this Report, we update the Human Freedom Index of Hong Kong and neighbouring territories to 2016 according to the methodology of CATO-Fraser Institutes. There is no need to update the Democracy Index as it already reflects conditions in 2016.

(1) <u>2015 Economic Freedom, Personal Freedom, and Democracy Indices (Table 13)</u>

In 2014 (data used in our First Report), Hong Kong topped the Human Freedom Index in the world. From 2014 to 2015, Hong Kong's scores in Economic Freedom and Personal Freedom declined by 0.7% and 3.2%. As a result, her score in the Human Freedom Index declined by 2%, and her rank slipped to world's number 2 behind Switzerland.

Table 13 compares the 2015 scores and ranks of the three indices of Hong Kong with neighboring territories. In 2014, Hong Kong ranked above all neighbouring territories in Economic Freedom and Personal Freedom. As a result, Hong Kong also ranked above all

neighbouring territories in Index (B), the Freedom and Democracy Index, even though her rank in the Democracy Index was mediocre.

In 2015, as a result of the 3.2% decline in Hong Kong's Personal Freedom Index, Hong Kong slipped behind Taiwan and Japan in Personal Freedom (but was still ahead of South Korea and Singapore). Hong Kong still topped all neighbouring territories in Human Freedom. Thus, Hong Kong's Index (B), the Freedom and Democracy Index, slipped behind Japan, Taiwan, and South Korea, but was still ahead of Singapore.

Table 13: International Indices of Hong Kong and Neighbouring Territories

	Index (B) – Freedom and Democracy Index (2015)				
	Human Freedom Index			Democracy Index	Aggregate
	Economic Freedom	Personal Freedom	Aggregate		
Hong Kong	8.97 (1)	8.79 (26)	8.88 (2)	6.50 (67)	8.09
Mainland China	6.40 (113)	5.62 (136)	6.01 (130)	3.14 (136)	5.05
Japan	7.47 (39)	8.93 (23)	8.20 (27)	7.96 (23)	8.12
Korea	7.54 (32)	8.79 (27)	8.17 (29)	7.97 (22)	8.10
Singapore	8.81 (2)	7.86 (50)	8.34 (18)	6.14 (74)	7.60
Taiwan	7.70 (21)	8.98 (20)	8.34 (18)	7.83 (31)	8.17

Note 1: Rankings are bracketed.

Note 2: The 'Individual Freedom' and 'Economic Freedom' sub-categories each contain a few dozens of individual items for the assessment of 159 countries and regions around the world.

Note 3: The 'Democracy Index' assesses 167 countries and regions around the world on the basis of five items: electoral process and pluralism, functioning of government, political participation, political culture, and civil liberties.

(2) <u>The Composition of the 'Personal Freedom Index' (Table 14)</u>

The 'Personal Freedom Index' is composed of 7 items: they are respectively, rule of law, security and safety, freedom of movement, freedom of religion, freedom of association, freedom of expression and information, and gender identity and relationships – all key components of human rights and individual freedoms. Table 14 shows the 2014 scores and rankings of Hong

Kong and neighbouring territories. Hong Kong's good performance on the Personal Freedom Index suggests that Hong Kong is indeed capable of defending its core values under 1C2S.

Despite recent declines in Hong Kong's Personal Freedom Index, the scores of Hong Kong in rule of law and freedom of speech are relatively high in comparison with Hong Kong's scores in the Democracy Index. This is not surprising given the restrictions on electing the Chief Executive in Hong Kong. Interestingly, in our surveys, the Hong Kong public also gives higher scores to rule of law and freedom of speech relative to Hong Kong's progress in democratization.

Table 14: Personal Freedom Index for Hong Kong and Neighbouring Territories

	Personal Freedom Index (2015)							
	Rule of Law	Security and Safety	Freedom of Movement	Religion Freedom	Freedom of Association & Assembly	Freedom of Expression & Information	Gender Identity and Relationships	Aggregate
Hong Kong	7.79	9.40	10.00	9.26	7.64	8.77	9.25	8.79
	(16)	(41)	(1)	(7)	(71)	(39)	(36)	(26)
Mainland China	4.65	7.51	3.33	4.94	1.67	5.84	10.00	5.62
	(83)	(111)	(143)	(154)	(126)	(140)	(1)	(136)
Japan	7.58	9.68	10.00	8.75	8.89	9.23	9.25	8.93
	(20)	(27)	(1)	(43)	(52)	(25)	(36)	(23)
Korea	7.58	9.46	8.33	9.26	9.44	9.02	9.25	8.79
	(21)	(37)	(71)	(8)	(39)	(33)	(36)	(27)
Singapore	8.04	9.41	8.33	7.69	3.61	7.36	8.00	7.86
	(12)	(39)	(71)	(104)	(112)	(96)	(77)	(50)
Taiwan	7.11	9.50	10.00	9.19	9.86	9.25	10.00	8.98
	(25)	(36)	(1)	(15)	(28)	(24)	(1)	(20)

(3) Updating the 'Economic Freedom Index'

The Heritage Foundation's Economic Freedom Index is very similar to that of CATO-Fraser Institutes, but the former only has a one-year time lag instead of the two-years. The 2017 report of Heritage Foundation already reflects conditions in 2016, giving us the data to update the CATO-Fraser Economic Freedom Index. From 2015 to 2016, Heritage Foundation's Economic Freedom Index has risen by 1.01%. We apply this percentage change to the 2015 Economic Freedom Index of CATO-Fraser, and the updated 2016 score is 9.09 (Table 16).

(4) Updating the 'Personal Freedom Index' (Table 15)

The 7 components of the 'Personal Freedom Index' are aggregated from a list of sub-components. We collect the sub-components from their sources and updated the 'Personal Freedom Index' to 2016. A complete list of sub-components and their sources is shown in Appendix I.

Table 15: Updated Personal Freedom Index for Hong Kong and Neighbouring Territories

		Personal Freedom Index (2016)							
	Year	Rule of Law	Security and Safety	Freedom of Movement	Religious Freedom	Freedom of Association & Assembly	Freedom of Expression & Information	Identity and Relationships	Aggregate
Hong Kong	2014	7.80	9.33	10.00	10.00	9.79	8.23	10.00	9.08
	2015	7.79	9.40	10.00	9.26	7.64	8.77	9.25	8.79
	2016	7.14	9.40	10.00	9.26	7.64	8.67	9.25	8.62
Mainland China	2016	4.70	7.51	3.33	4.94	1.67	6.08	10.00	5.66
Japan	2016	7.64	9.68	10.00	8.75	8.89	9.02	9.25	8.92
Korea	2016	7.44	9.46	8.33	9.26	9.44	9.01	9.25	8.75
Singapore	2016	7.68	9.41	8.33	7.69	3.61	7.49	8.00	7.79
Taiwan	2016	7.11	9.50	10.00	9.19	9.86	9.33	10.00	8.99

From 2014 to 2016, the scores of 4 sub-indices decreased, namely, rule of law (falling from 7.8 to 7.14, decreasing by 8.46%), freedom of religion (falling from 10 to 9.26, decreasing by 7.4%), association (falling from 9.79 to 7.64, decreasing by 22%), gender identity and relationship (from 10 to 9.25, decreasing by 7.5%). The scores of 2 sub-indices rose, namely, security and safety (rising from 9.3 to 9.4, increasing by 1.1%), and expression and information (rising from 8.23 to 8.67, increasing by 5.3%). The score of freedom of movement is unchanged. Hong Kong's score of Personal Freedom fell from 9.08 in 2014 to 8.62 in 2016, falling by 5.1%. The 22% decrease in the sub-index of freedom of association and assembly contributed the most to the fall in the Personal Freedom Index.

In comparison with neighbouring territories in 2016, Hong Kong ranked relatively high in freedom of religion (slightly ahead of Taiwan, Japan, Singapore, and tie with South Korea). Hong Kong did not rank so well in rule of law (slightly ahead of Taiwan but slightly behind Japan, South Korea, and Singapore), in association (slightly behind Taiwan, South Korea, and Japan but ahead of Singapore), and in expression and information (slightly behind Taiwan, Japan,

and South Korea but ahead of Singapore). Aggregating all 7 sub-indices, Hong Kong's Personal Freedom Index ranked slightly behind Taiwan, Japan, and South Korea, but ahead of Singapore. As a whole, Hong Kong's 2016 score of 8.62 was close to those of developed neighbouring territories.

(5) Updating Index (B) – the Freedom and Democracy Index (Table 16)

The 2016 Democracy Index was released by the EIU. From the updated Economic Freedom and Personal Freedom Indices, we can obtain the updated Human Freedom Index and Index (B). In 2016, Hong Kong's score in the Human Freedom Index was 8.85, above all neighboring territories. Hong Kong's score in Index (B) – the Freedom and Democracy Index was 8.04, lower than Taiwan and South Korea but above Japan and Singapore.

Table 16: Updated International Indices of Hong Kong and Neighbouring Territories

	Index (B) – Freedom and Democracy Index (2016)				
	Human Freedom Index			Democracy Index	Aggregate
	Economic Freedom	Personal Freedom	Aggregate		
Hong Kong	9.09	8.62	8.85	6.42 (68)	8.04
Mainland China	7.06	5.66	6.36	3.14 (136)	5.29
Japan	7.11	8.92	8.02	7.99 (20)	8.01
Korea	7.81	8.75	8.28	7.92 (24)	8.16
Singapore	8.89	7.79	8.34	6.38 (70)	7.69
Taiwan	7.89	8.99	8.44	7.79 (33)	8.22

(6) Hong Kong's Trends in terms of different Indices (Table 17)

Hong Kong's Economic Freedom Index score decreased from the 9.17 in 2008 to 8.97 in 2015, but rebounded to 9.09 in 2016. The Personal Freedom Index climbed from 8.87 in 2008 to a peak of 9.08 in 2014, but fell to 8.62 in 2016, falling by 5.1%. The Human Freedom Index score has been on an upward trajectory, increasing slightly from 9.02 in 2008 to a peak of 9.06 in 2014, but declined to 8.85 in 2016, falling by 2.3%.

Over the past decade, Hong Kong has made some progress in its democratization, with its Democracy Index score increasing from 5.85 in 2008 to a peak of 6.5 in 2015, and rank from the

84th to the 67th. This was probably due to the increase of directly elected seats in our Legislature. However, the score fell slightly to 6.42 in 2016, falling by 1.2%. Index (B), the Freedom and Democracy Index, rose from 7.96 in 2008 to a peak of 8.19 in 2014, but declined to 8.04 in 2016, falling by 1.8%.

Given the adverse international reactions to recent political events, the declines in these indices are not surprising. Hong Kong's Personal Freedom Index, Democracy Index, and Index (B) – the Freedom and Democracy Index, have declined respectively by 5.1%, 1.2%, and 1.8% from their peaks. Even though the Personal Freedom Index has the largest decline, the 2016 score of 8.62 is still quite decent, close to those of developed neighbouring territories.

Looking into the change in the seven sub-indices of the Personal Freedom Index from 2014 to 2016, four sub-indices have substantial declines, namely, rule of law, religious freedom, freedom of association and assembly, and gender identity and relationships. The international community does have concerns on personal freedoms in Hong Kong.

Table 17: Hong Kong's Scores and Ranks in International Indices

Index (B) – Freedom and Democracy Index (2016)					
	Human Freedom Index			Democracy Index	Aggregate
	Economic Freedom	Personal Freedom	Aggregate		
2008	9.17 (1)	8.87 (26)	9.02 (1)	5.85 (84)	7.96
2010	8.96 (1)	8.90 (26)	8.93 (1)	5.92 (81)	7.93
2011	8.92 (1)	9.14 (18)	9.03 (1)	5.92 (80)	7.99
2012	8.98 (1)	9.09 (18)	9.04 (1)	6.42 (63)	8.16
2013	8.97 (1)	9.01 (20)	8.99 (1)	6.42 (65)	8.13
2014	9.03 (1)	9.08 (20)	9.06 (1)	6.46 (66)	8.19
2015	8.97 (1)	8.79 (26)	8.88 (2)	6.50 (67)	8.09
2016	9.09	8.62	8.85	6.42 (68)	8.04

Our indices are only updated to 2016 due to data limitations, and they probably have deteriorated more given the controversial events in 2017. In 2017, the scores of Hong Kong's Democracy Index (EIU) and World Freedom Index (Freedom House) fell another 1.7% and 3.3% respectively. As mentioned above, though opinions of international think tanks on Hong Kong have turned negative, opinions of the Hong Kong public on 1C2S have improved. The Hong Kong public has been positive about the change of CE, but international think tanks have mostly neglected this change.

Despite recent declines, Hong Kong's scores and rankings in the Personal Freedom Index, Democracy Index, and Index (B) – the Freedom and Democracy Index, remain way above those of the Mainland. The fear that Hong Kong has become 'Mainlandised' is vastly exaggerated.

III. Constructing the Index

Constructing the Index requires the collection of a substantial volume of data and detailed analysis; this study is merely the first step in constructing a comprehensive Index. As aforementioned, whilst the public's assessment of 1C2S and international assessments of Hong Kong's democracy and freedoms most certainly diverge, both measurements remain valuable points for reference. As such, we synthesize both assessments in constructing a more comprehensive index.

(1) Constructing the Index from Public Survey

The 1C2S Public Survey recorded the public's assessments of nine different items under 1C2S; based on the scores of these nine items, we adopted the following three methods in constructing the Index (see Table 18 for the results):

- Simple Average
- Principal Component Analysis
- Factor Analysis

Table 18: Score Constructed from Public Survey（Valid Sample Size: 918）

	Score (1-7)	Score (0-10)
Simple Average	3.99	4.98
Principal Component Analysis	3.99	4.99
Factor Analysis	3.96	4.94

The results of all three methods are highly similar, largely due to the clustered nature of the public's assessments of the nine items (cf. the distributions of the nine items are highly correlated), which causes the core components or sub-items across all three methods to be highly similar.

Simple Average (of the Nine Items)

This is the most common method employed in constructing indices – its strength lies in its parsimony and accessibility; its weakness is that it assigns equal weighting to all items (i.e. it assumes equal importance for all items).

Principal Component Analysis

Principal Component Analysis is a statistical method that processes and simplifies data; it is the standard scientific method employed in constructing indices. Through statistical analysis, it

extracts the data set's principal components and identifies their weights in a way that best explains the variations across the data; its flaw lies in the complex calculations involved, which render the method inaccessible to laypersons. After complex calculations, we have found that there is negligible difference between results arrived at by using the average approach, and the results acquired via Principal Component Analysis

Factor Analysis

Factor Analysis extracts common factors from the data, and shares a similar methodology with Principal Component Analysis. Its strength lies in its ability to identify hidden and representative factors amongst the many variables and group variables of a similar nature and converting the same into a common factor, which reduces the total number of variables. Its weakness is that its complex calculations are difficult to navigate for laypersons. After complex calculations, we have found that there is negligible difference between the results arrived at by using the average approach, and the results acquired using Factor Analysis.

Given the similarity of the results from all three methods, we adopted the simplest and most commonly used method – i.e. the average of the nine items – in constructing the Index.

(2) Comparison of Two Rounds of The Index

The Index, which is the average of Indices (A) and (B), is 6.54. As mentioned before, this is not directly comparable with that in the first Report. Table 20 compares the scores of the Index using a fully comparable methodology across the two rounds. Survey results of the first and second rounds are 4.88 and 4.84 respectively (calculated by the 8 identical questions, see Table 1). The 'Freedom and Democracy Index' in the first report is 8.19 with data from 2014. Since we have updated the 'Freedom and Democracy Index' to 2016 from international databases, both rounds of 1C2S Index should employ the latest estimates of 8.04. Using a fully comparable index construction method, the Index declined from 6.46 to 6.44, falling by a negligible 0.02 or 0.3%.

Table 19: Comparison of Two Rounds of The Index

	Sub-item Scores (Equal Weighting Assigned)		Average
	Public Survey	Freedom and Democracy Index	
2017.6	4.88	8.04	6.46
2017.12	4.84	8.04	6.44

(4) Hong Kong's Scores and Ranks in Freedom House's 'Freedom in the World'

Apart from Cato and Fraser Institutes' Economic and Personal Freedom Indices, which provide part of the basis for our Index, the 'Freedom in the World' survey conducted by Freedom House is also a commonly used indicator for freedom. While our Index is not based on this index, we think it is perhaps necessary to comment on it given the recent negative news on Hong Kong's decline in this index. The 'Freedom in the World' consists of two ratings, namely political rights and civil liberties, divided into seven scores (Table 21).

According to the 2018 'Freedom of the World' (reflecting the situation in 2017), Hong Kong has a rating of 2 in civil liberties (1 representing the freest and 7 the least free) and 5 in political rights, giving an overall rating of 3.5. Ranking 111th in the world, Hong Kong is placed below Japan, Taiwan and South Korea, yet above Singapore. The aggregate score of Hong Kong (the total of all 7 scores, higher the freer) fell continuously by 2 points a year from 67 in 2013 to 61 in 2016, and fell further to a record low of 59 in 2017.

Table 20: Hong Kong's Scores in Freedom House's 'Freedom in the World' (2016)

Ratings（1-7）	Scores	
Political Rights 5	Electoral Process	3/12
	Political Pluralism and Participation	7/16
	Functioning of Government	6/12
Civil Liberties 2	Freedom of Expression and Belief	12/16
	Associational and Organizational Rights	8/12
	Rule of Law	12/16
	Personal Autonomy and Individual Rights	13/16
Overall Rating 3.5	Aggregate Score	61/100

'Freedom of the World' has a relatively low rating for Hong Kong, which is different from our 'Freedom and Democracy Index'. The 'Freedom and Democracy Index' is a more balanced and comprehensive index than the 'Freedom of the World'. The former has three main components, namely economic freedom, personal freedom (similar to Freedom House's civil liberties) and democracy index (similar to Freedom House's political rights). Each component has 1/3 weight. The latter neglects economic freedom completely (zero weight) and considers only civil liberties (similar to personal freedom in the Index) with a weight of 0.6, and political rights (similar to our democracy index) with a weight of 0.4.

Further, Freedom House's 'Civil Liberties' Index only includes four main components, while Cato and Fraser Institutes' 'Personal Freedom Index' includes seven main components (Table 14). The latter is thus more comprehensive in scope.

Our Index and Freedom House's 'Freedom of the World' Index are not contradictory. In our 'Freedom and Democracy Index', Hong Kong has a high ranking for personal freedom and but only ranked 68th in the 'Democracy Index'. This is similar to Freedom House's result (relatively high rating for civil liberties but low rating for political rights). In addition, part of the data in two components of the 'Personal Freedom Index' ('Freedom of Association and Assembly' and 'Freedom of Expression') comes from Freedom House's data (see Appendix I). It therefore follows that the widely publicised decline of Hong Kong in this index does not invalid our results.

IV. 1C2S Mass Media Index (1C2S MMI)

News sentiment influences public opinion. By mining over 123,000 news articles and 61 million words from 20 local daily newspapers, 1C2S MMI monitors how "One Country Two Systems" ("1C2S") is conveyed in the mass media to provide a timely barometer of public sentiment towards 1C2S. The MMI complements our 1C2S Index as media sentiment is an important factor in the formation of public opinion. To dovetail with our main Index, we will compile the MMI half yearly.

This represents our initial attempt to use big data techniques to measure media sentiment towards 1C2S. In the longer run, subject to resource availability, the MMI opens up many opportunities of further research in public opinion formation. The MMI can be compiled at high frequency intervals (e.g. monthly) as it is not subject to the long time lags of surveys. It is also possible to investigate the effect of specific significant events (e.g., co-location arrangement for the Express Rail link) on media sentiment, or to compare sentiments in the local and overseas media.

1C2S MMI is a net sentiment index of newspaper articles over a given time. Newspaper is only part of the media, and the MMI does not cover news reported by traditional media such as television and radio, as well as news carried by new media. Measuring the sentiments of news reported by television and radio is very difficult as there is no comprehensive text-based data base available. Measurement of sentiments of new media is also very difficult as it will be very demanding on resources. Furthermore, while widely accepted credibility ratings of different newspapers are available through regular opinion polls, comparable ratings on the credibility of different new media outlets are not available. We will thus confine our study to newspaper articles on 1C2S.

It should be noted that many newspapers have also broadcasted their news through online outlets such as websites and mobile apps. In so far as the news articles of these online outlets are the same as their printed versions, the sentiments of these articles are already included in our MMI regardless of whether they are printed or broadcasted online. 1C2S MMI currently only gauges sentiment of an important subset of mass media, printed newspapers, as a general representation of sentiment in mass media.

(1) <u>1C2S MMI (Half-Yearly)</u>

The 1C2S MMI index in the second half of 2017 comes in at 97.14, a slight decrease from 99.96 recorded in the previous 6 months. This is consistent with the decrease of the main Index.

Table 21: 1C2S MMI (Half-Yearly)

2016 H2	2017 H1	2017 H2
84.04	99.96	97.14

Note: The base month of 1C2S MMI is set at July 2017, 20 years after the establishment of Hong Kong Special Administrative Region.

(2) Comparison of Historical Performance of 1C2S MMI

The big data era opens doors to new modes of public opinion research. Through sentiment analysis, a technique that combines natural language processing, text analysis and computational linguistics, researchers can establish the overall attitude conveyed by a speaker or writer. A Hong Kong study in 2013 suggests that sentiment analyses lead telephone surveys by about 2 weeks.

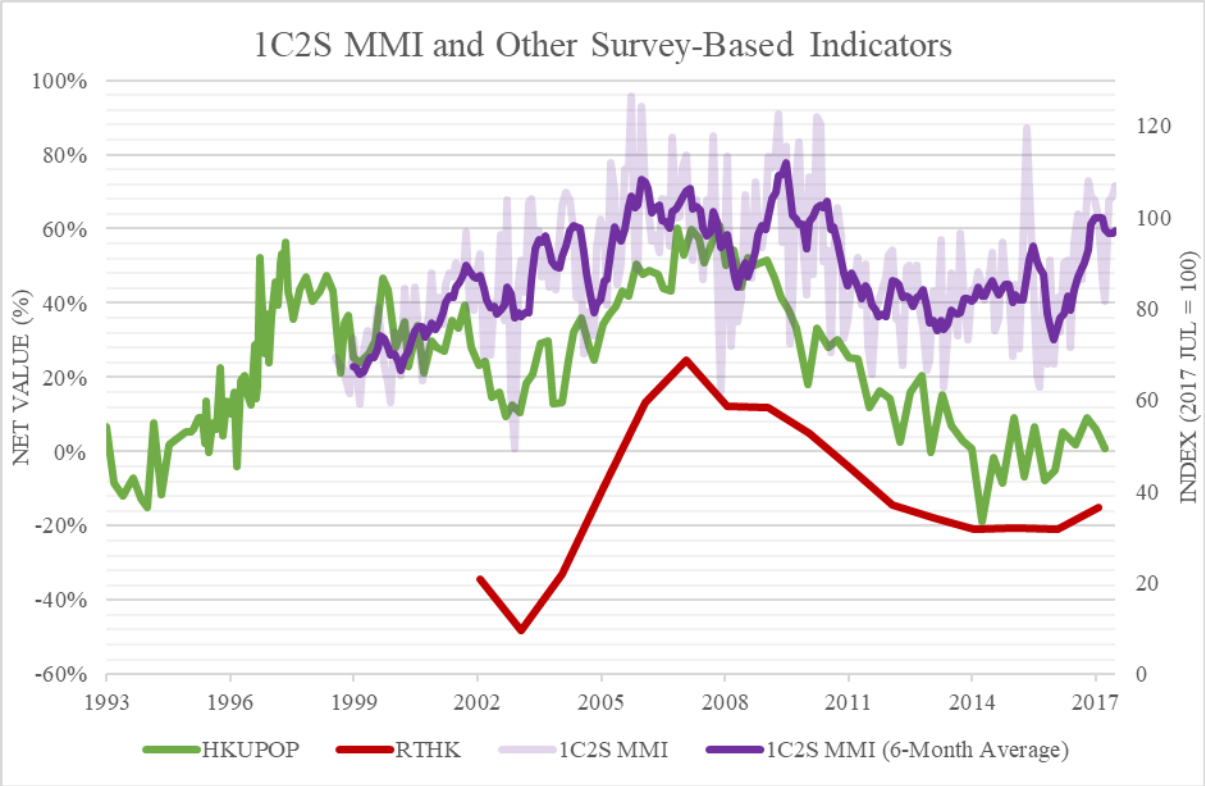
Fig. 5 juxtaposes 1C2S MMI with survey results regarding views towards 1C2S by two organizations, namely Radio Television Hong Kong (RTHK) and Public Opinion Programme by the University of Hong Kong (HKUPOP). Remarkably, these series depict a similar overall trend of public views - albeit with some quantitative differences across the 3 samples. All three series rose in the early 2000's to a peak around 2007; then fell to a trough around 2014-16 with Occupy Central and the civil unrest in Mongkok, and then recovered thereafter.

As for quantitative differences, 1C2S MMI tends to reveal the immediate effect of speeches and activities of high-ranking officials, especially those of the Chinese leaders which have extensive coverage in mass media. Survey-based indicators might be affected by events with no direct relevance to 1C2S such as the re-election of Donald Tsang with high popularity in 2007. 1C2S MMI also serves as a better proxy for cases with high newsworthiness, while survey-based indicators trace incidents which impose more universal impacts. For example, 1C2S MMI gives a more negative rating during the civil unrest in Mong Kok, which came as a shock yet affected only limited parties. Survey-based indicators, on the other hand, show a more negative rating during the "Occupy Central" movement, which affected the general public in various aspects.

Table 22: Time Series of 1C2S MMI since 2014

Year	Half-Year	Month	1C2S MMI (2017-Jul = 100)	
			Monthly	6-Month
2014	H1	Jan	79.97	79.14
		Feb	74.17	78.94
		Mar	96.57	79.17
		Apr	81.99	82.34
		May	73.21	82.29
		Jun	84.30	81.70
	H2	Jul	83.46	82.28
		Aug	88.12	84.61
		Sep	84.98	82.68
		Oct	81.82	82.65
		Nov	85.67	84.73
		Dec	92.29	86.06
2015	H1	Jan	75.30	84.70
		Feb	77.80	82.98
		Mar	94.43	84.55
		Apr	87.11	85.43
		May	84.35	85.21
		Jun	69.72	81.45
	H2	Jul	85.16	83.10
		Aug	71.31	82.01
		Sep	93.72	81.89
		Oct	119.39	87.27
		Nov	105.59	90.81
		Dec	86.43	93.60
2016	H1	Jan	65.41	90.31
		Feb	62.97	88.92
		Mar	84.60	87.40
		Apr	67.90	78.82
		May	90.49	76.30
		Jun	67.87	73.21
	H2	Jul	82.53	76.06
		Aug	74.79	78.03
		Sep	90.05	78.94
		Oct	90.74	82.75
		Nov	71.54	79.59
		Dec	94.74	84.06
2017	H1	Jan	100.73	87.10
		Feb	86.41	89.03
		Mar	96.44	90.10
		Apr	107.89	92.96
		May	104.60	98.47
		Jun	103.72	99.96
	H2	Jul	100	99.84
		Aug	86.38	99.84
		Sep	81.64	97.37
		Oct	103.44	96.63
		Nov	104.57	96.63
		Dec	106.79	97.14

Fig. 5: 1C2S MMI and Other Survey-Based Indicators



(3) <u>The Construction of 1C2S MMI</u>

Our sample consists of around 123,000 newspaper articles related to 1C2S from 20 local daily newspapers that were published between April 1998 and December 2017.

Each article undergoes a "tokenisation" process whereby articles are segmented into words/phrases (often referred to as tokens) via a computer algorithm. In the sample period of approximately 20 years, our text corpus contains some 61 million tokens. From this massive dataset, common words that are inconsequential to the understanding of news articles, such as "我", "你", "的", are first removed before further analysis.

To determine the sentiment of an article, words are categorised as: "positive", "negative" or "neutral" (not a sentiment word). A positive word is then given a sentiment score of 1, a negative word is assigned a score of -1, and a neutral word has a score of 0. The classification scheme adopted is given by the sentiment dictionary for Traditional Chinese words developed by Ku et al. (2009).

The positive, or negative as the case may be, sentiment of a paragraph is quantified via a count of the number of positive (negative) words it contains, adjusted by the its total word count. The sentiment score of an article is calculated as the average difference between positive and negative proportions among constituent paragraphs. Table 23 reveals substantial differences in the number of news articles published by newspapers during the sample period. Article count of a newspaper alone could be an insufficient representation of its influence and perceived importance among readers. To ensure 1C2S MMI's reliability, the sentiment score for each newspaper is further weighted by public perceptions of its credibility based on the survey "Public Evaluation on Media Credibility" conducted by Centre for Communication Research, The Chinese University of Hong Kong. Finally, 1C2S MMI is derived as an index that captures the weighted average sentiment score among newspapers in a given month.

Table 23: Data Source of MMI

Newspaper	Number of Articles
A Daily	81
am730	1,750
Apple Daily	7,801
Headline Daily	847
Hong Kong Commercial Daily	11,817
Hong Kong Daily News	4,476
Hong Kong Economic Journal	8,607
Hong Kong Economic Times	3,690
Hong Kong Globe	194
Metro Daily	1,187
Ming Pao Daily News	10,138
Oriental Daily News	6,904
Sharp Daily	152
Sing Pao	4,600
Sing Tao Daily	6,424
Sky Post	385
Ta Kung Pao	24,710
The Sun	4,828
Tin Tin Daily News	452
Wen Wei Po	24,226
Total	**123,269**

Table 24: Number of Words

Year	Number of Words
1998	669,676
1999	2,498,254
2000	2,320,584
2001	2,640,690
2002	2,545,546
2003	2,713,403
2004	4,801,621
2005	2,874,994
2006	1,879,834
2007	2,797,512
2008	1,446,629
2009	1,815,839
2010	1,880,198
2011	2,040,824
2012	3,441,893
2013	3,312,415
2014	5,386,835
2015	4,411,567
2016	5,590,354
2017	6,204,647
Total	**61,273,315**

(4) Accuracy of 1C2S MMI Index

1C2S MMI index is underpinned by a lexicon-based model which treats each paragraph as a bag of words and as a result may detract from the overall context of the paragraph. For instance, the model may not be able to detect nuances in writing such as sarcasm and therefore do not understand fully the true meaning of a paragraph. Nonetheless, whilst this may be a limitation when analysing publications such as novels, this is less of an issue for news articles which are written in a more direct manner.

To ascertain the accuracy of this lexicon-based method in identifying the sentiment of a paragraph, two researchers manually categorised around 18,000 paragraphs randomly drawn from the text corpus into "positive", "neutral" and "negative" categories. References to which newspaper a paragraph came from were removed before the paragraph was presented to our team of researchers. If these two researchers classified a paragraph differently, a third researcher would be asked to make the final verdict.

Table 25: Results of Accuracy Test

	Positive	Neutral	Negative
No. of Paragraphs Classified by Human Researchers	2,363	14,202	1,472
Net Value	21.76%	14.42%	2.92%

In this accuracy test, sentiment labels given by the first two researchers coincided with each other around 80% of the time. As shown in Table 5, 2,363 paragraphs were considered as "positive" whereas 1,472 were classified as "negative."

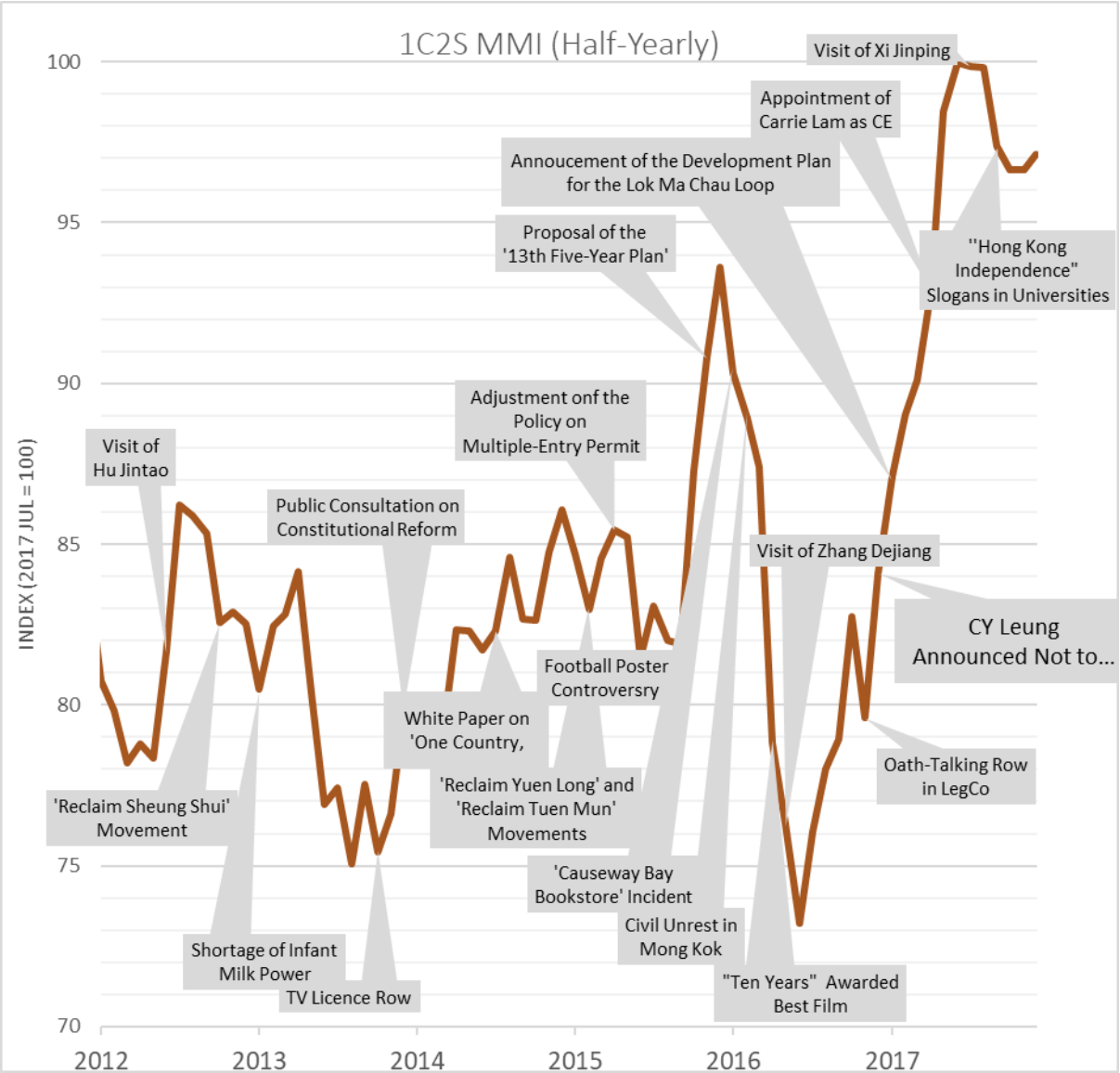
Sentiment scores for each group of paragraphs were then derived by the same lexicon model used in the construction of 1C2S MMI. In our model, the sentiment of a paragraph is assumed to be encapsulated in the proportion of positive words minus that of negative words - the higher the sentiment score, the more positive a paragraph is expected to be.

Table 25 also shows the average sentiment scores of these 3 groups of paragraphs. In particular, "positive" paragraphs identified by the team of researchers have an average sentiment score of 21.76%, around 7.5 times as high as "negative" paragraphs. In addition, the differences in average sentiment scores among these 3 groups are tested to be statistically significant via a multivariate regression model, suggesting that results given by the lexicon model are largely in line with judgements made by human researchers.

(5) Recent Performance (2012-2017)

Fig. 6 illustrates the changes of 1C2S MMI from 2012 to date. 1C2S MMI reached its peak of more than three years when President Hu Jintao visited Hong Kong in June and the new government took office in July 2012. A steady decline followed the "Reclaim Sheung Shui" movement in September which stirred up the discussion on "Hong Kong independence". The MMI dropped further with the shortage of infant milk power caused by parallel traders in January 2013, reaching a nadir in October at the time of the TV licence row.

Fig. 6: 1C2S MMI (2012-2017)



As the public consultation on constitutional reform started in December 2013, 1C2S MMI regained support. Although the knife attack on Kevin Lau and the ""Reclaim Yuen Long" and "Reclaim Tuen Mun" movements led to some fluctuations in the MMI between 2014 and 2015, the overall level was relatively stable because the media did not present a one-sided view of the 'White Paper on "One Country, Two Systems"', the NPC Standing Committee's "8.31" decision and the ""Occupy Central" movement.

Premier Li Keqiang's government work report started another upward trend since March 2015. His report reiterated that Hong Kong will continue to enjoy a high degree of autonomy. The upsurge was supported by the adjustment of the policy on multiple-entry permit in April. Despite the controversy over Chinese Football Association's poster in June, the proposal of the "13th Five-Year Plan" promulgated by the Central Government in November ensured Hong Kong's strategic positions and boosted 1C2S MMI substantially to a new peak since 2012.

1C2S encountered the most severe challenge in the beginning of 2016 when 1C2S MMI plummeted to the lowest level ever since the handover. The "Causeway Bay Bookstore" incident aroused widespread media attention in January. The civil unrest in Mong Kok evolved into a clash between civilians and the police in February. The award of the independent film "Ten Years" as the best film in Hong Kong Film Awards in April aggravated the negative sentiment in the mass media.

Zhang Dejiang, chairman of the NPC Standing Committee, visited Hong Kong in May 2016, and the MMI bottomed out in June. The MMI has risen strongly since December 2016, when CY Leung announced that he would not run for a second term. Hong Kong and Shenzhen concluded the development plan for the Lok Ma Chau Loop in January 2017. In the same month, Carrie Lam and John Tsang announced to run for Chief Executive. Carrie Lam was appointed as CE and met by President Xi Jinping. Though the NPC Standing Committee’s interpretation of the Basic Law in response to the oath-taking row in the Legislative Council in November 2016 and “Hong Kong independence” slogans were found posted in universities in September 2017, MMI still rose to a peak in the second half of 2017 under the new administration of Carrie Lam.

Appendix I: Sub-components of the "Personal Freedom Index"

	Sub-components	Sources
Rule of Law	Procedural Justice	Rule of Law Index, World Justice Project
	Civil Justice	
	Criminal Justice	
Security	Homicide	Global Study on Homicide, UN Office on Drugs and Crime
	Disappearance	Human Rights Data Project, CIRI
	Intensity of Violent Conflicts	Uppsala Conflict Data Program, Uppsala University
	Level of Organized Conflict (Internal)	Global Peace Index, Institute for Economics and Peace
	Terrorism Fatalities	Global Terrorism Database, University of Maryland
	Terrorism Injuries	
	Women's Security	Gender, Institutions and Development Database, OECD
Movement	Freedom of Foreign Movement	Human Rights Data Project, CIRI
	Freedom of Domestic Movement	
	Women's Freedom of Movement	Gender, Institutions and Development Database, OECD
Freedom of Religion	Freedom to Establish Religious Organizations	Institutional Profiles Database, French Ministry of the Economy
	Autonomy of Religious Organizations	
Freedom of Association *	Freedom of Association	Institutional Profiles Database, French Ministry of the Economy
	Freedom of Assembly and Demonstration	
	Autonomy of Organizations	
	Freedom to Establish Organizations	
	Associational and Organizational Rights	Freedom of the Press, Freedom House
Expression and Information	Press Killed	Committee to Protect Journalists
	Press Jailed	
	Laws and Regulations that Influence Media Content	Freedom of the Press, Freedom House
	Political Pressures and Controls on Media Content	
	Access to Cable/Satellite	Institutional Profiles Database, French Ministry of the Economy
	Freedom of Access to Foreign Information	
	State Control over Internet Access	
Equality of Marital Rights	Same-sex Relationships	State-Sponsored Homophobia Report, International Lesbian & Gay Association
	Parental Rights	Gender, Institutions and Development Database, OECD
	Divorce	

* The component is replaced by Freedom House's "Freedom of the Press" as the Institutional Profiles Database is out-of-date