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# Article



# A Comparative Analysis of Expert Advisors' Role Perceptions in Policymaking: The Case of Hong Kong, China

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**ABSTRACT** *Using the Q method with a Hong Kong dataset, this paper identifies four types of expert advisors in a hybrid regime. These four types have shared and distinct preferences for managing tensions between scientific knowledge and value/interests, between scientific and lay-person' knowledge, and the different preferences of policymakers, citizens, and experts. Their degrees of involvement in policymaking and varied strategies to influence policymaking reflect the features of the hybrid regime. The findings provide useful lessons for expert advisors to manage tensions between science and politics over contested issues.*

**Keywords:** expert advisors; comparative role perceptions; hybrid regime; Q method; policymaking

## 1. Introduction

Comparative analysis of expert advisors' role perceptions can shed light on important but insufficiently explored questions concerning advisor–client relations (Radin 2016), advisory styles (Jenkins-Smith 1990, pp. 109–121; Hoppe 2016), and the content of policy advice (Craft and Howlett 2012). Few studies have empirically examined this question outside Western democracies. This paper studies the non-governmental expert advisors' role perceptions in a hybrid regime.

In Western democracies, experts traditionally perceive their roles as providing professional, technical, and scientific advice to solve complex policy problems (Aberbach and Rockman 1989). Experts are often expected to bridge the gap between the scientific community and decision makers for knowledge utilization (Feldman and Ingram 2009). Given plural values and interests, experts often face the dilemma of sticking to their professional craft while effectively shaping decisions (Weimer 1998).

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In authoritarian regimes, expert advisors also conduct research, promote learning results, and engage in policy debates to influence policies (Wang 2011; Zhu 2013). However, the government centrally controls resources to conduct policy research and venues to influence policies (Kriesi 2004). Experts have limited institutional space to openly propagate critical and alternative advice (Besha 2010; Cheek et al. 2018). Public participation in policymaking is limited to scientific and technocratic elites, and is largely cooperative with the state (Gilley 2012).

In hybrid regimes that have both liberal democratic and authoritarian elements (Wigell 2008), expression of dissent and plural participation are often allowed, but societal interests have to influence policies through state-sanctioned channels (e.g. Jayasuriya and Rodan 2007; Owen and Bindman 2019)

Hong Kong offers an opportunity to explore expert advisors' preferences in hybrid regimes. Hong Kong has civil liberty and rule of law, but also has corporatist domination, limited electoral competition, and control by an authoritarian sovereignty (Case 2007; Cheng 2016). The local government inherited an executive-led system from the colonial era that sought to control the policy agenda, frame policy problems and select options supported by expert advice and rational policy analysis (Scott 2010). Since decolonization and democratic transition from the mid-1980s, Hong Kong's centralized policymaking has been increasingly challenged by plural values and interests brought by new actors such as elected politicians and mobilized civil society groups (Cheung 2014). There has been growing division over democratic development and economic and social issues among governing elites and within civil society (Oksanen 2011; Cheng 2016). In addition, Hong Kong's political institutions exemplify both Western-style liberal values and Confucian values emphasizing hierarchical loyalty (Lui and Cooper 1997; Chu 2016). In such a complex setting, it is interesting to explore how expert advisors perceive and manage the tension between scientific knowledge versus value/interests, between scientific knowledge versus laypersons' knowledge, and the politics of different preferences by policymakers, citizens, and experts.

The paper proceeds as follows. First, we review the literature on expert advisors' perceptions of their roles in policymaking in democratic regimes and authoritarian regimes. Second, we introduce the Hong Kong political context and what we expect to find about expert advisors' role perceptions in such a hybrid regime. Third, the methods for collecting and analyzing the data are explained. Fourth, the shared and distinct characteristics of four types of expert advisors identified from the data are described. Finally, the findings are compared with those of previous studies and their implications are discussed.

## 2. Literature Review

There is a potential tension in the composition of expert advice, sources of policy-relevant knowledge, and divergent preferences of policymakers and citizens in democratic systems (Table 1). Expert advisors hold different views on how to manage such tension.

The first tension is over whether expert advice comprises scientific and technical facts, or values and interests. Some expert advisors perceive themselves as providers of scientific and technical advice, as opposed to the biased advice offered by interest groups (Rietig 2014). Other expert advisors recognize that expert knowledge has underlying

**Table 1.** Potential tension in the content of expert advice

	Potential tensions among a, b, and c
Composition of expert advice	a. Scientific and technical facts b. Values and interests
Source of policy-relevant knowledge	a. Scientific knowledge b. Lay person's knowledge
Preferences of expert advisors, citizens, and policymakers	a. Policymakers' preferred options b. Citizens' preferred options c. Expert advisors' preferred options

normative or evaluative characteristics (Grunwald 2003), and expert advisors often use norms and argumentation to persuade policymakers (Majone 1989, pp. 21–41).

The second tension is related to sources of policy-relevant knowledge. Some expert advisors believe that scientific analysis alone provides hard evidence for policymaking (Parsons 2001) and can solve social problems (Lindblom and Cohen 1979, pp. 10–11). In contrast, other expert advisors believe that “expertise” describes not only scientific knowledge, but also knowledge possessed by governmental and non-governmental actors in the policy network (Jasanoff 2003). These expert advisors also acknowledge that ordinary knowledge – namely common sense, casual empiricism, or thoughtful speculation – and analysis offered by laypeople are important for social problem solving (Lindblom and Cohen 1979, p. 12).

The third tension is over how to deal with the divergent preferences of policymakers, citizens, and expert advisors. Some expert advisors perceive their role as knowledge brokers, namely to translate technical information into usable forms for decision makers (Feldman and Ingram 2009) and to explain the social implications of scientific knowledge to policymakers and citizens (Fischer 2009). Some expert advisors tend to exclude political considerations in policy analysis (Meltsner 1976, p. 21) and stay aloof from politics (Jenkins-Smith 1990, pp. 109–110). Other expert advisors are proactive in persuading policymakers to adopt their recommended policy options (Jenkins-Smith, 1990, pp. 113–117). Still others use policy analysis to counter the arguments of opponents (Weible 2008), to break or build policy monopolies (Timmermans and Scholten 2006), to help citizens evaluate expert knowledge in making political choices (Collins and Evans 2007, p. 139), and to form consensus (Hoppe 1999). Some expert advisors even adapt policy analysis to support policymakers or citizen groups' preferred policy options (Hird 2005, pp. 35–67; Pielke 2007, pp. 15–17).

In authoritarian regimes, expert advisors' perceptions of their roles in policymaking differ. First, with a centralized policymaking structure, expert advisors often identify with policymakers' preferences (Rowe 2009), take into account the acceptance of governmental stakeholders in providing advice (Li and Wong 2019), demonstrate political loyalty, and lend political support to the regime (Huneus 2000; Gu and Goldman 2004; Huat 2011; Wang 2011; Wengle 2012).

Second, with limited political competition, expert advisors find it ineffective to engage in confrontational debates that challenge the ruling party (Han et al. 2014; Yao and Han 2016; Li and Wong 2019). The space for alternative expert advice is limited (Noakes 2014).

Third, in relatively closed policymaking, expert advisors will directly access decision makers for policy-related information and to recommend policy options (Zhu 2013). With limited citizen participation in policy formulation (Leong 2000; Mertha 2009; Gilley 2012), expert advisors with Confucian ideals might criticize government practices that violate the wider social good in a closed setting (Ackerly 2005). When direct lobbying fails, experts might mobilize public opinion through commercialized media and the Internet, and voice the concerns of citizens (Zhu 2013; Li and Wong 2019).

### 3. Context of Hong Kong

A former British colony, and a special administrative region of China since 1997, Hong Kong enjoys a high level of civil liberty and rule of law, but the selection of the Chief Executive (CE) of the government and legislators is not fully democratized.<sup>1</sup> The executive government, not the Legislative Council, controls policy initiation, formulation, and implementation.<sup>2</sup> The CE is nominated by an election committee comprising 1,200 members,<sup>3</sup> and then appointed by the central government of China. The CE cannot have a political party affiliation and has weak capability to mobilize public support (Cheng 2016)

To control policymaking within the bureaucracy, the CE nominates directors of bureaus from outside the government for the central government to appoint (Burns and Wei 2015). Many of the “outsider appointees” are experts sitting on government advisory or statutory bodies and are affiliated with academic institutions, professional associations, think tanks, and NGOs (Table 2).<sup>4</sup> The Hong Kong government has relied on advisory and statutory bodies (ASBs) to coopt professional and business elites to provide advice and support for government decisions (King 1975; Miners 1991; Cheung and Wong 2004). Many ASBs lack transparency and are not open to public participation (Table 3). Policy research largely relies on government funding,<sup>5</sup> and think tanks have found it difficult to mobilize resources and attract policy researchers.<sup>6</sup> In such a centralized structure, alternative and critical policy advice has often been excluded from policymaking processes (Cheung 2011).

There are high levels of political division in Hong Kong.<sup>7</sup> In a liberal and conflicted environment where the public tend to reject expert-led policymaking,<sup>8</sup> the government has faced pressure from street protests and vetoing or filibustering in the Legislative

**Table 2.** Background of policy secretaries/directors of bureaus (2002–2018)

Background	Number
Civil servants	26
Professionals with ASB experience before joining the government	19
Legislators/district councilors	7
Affiliation with academic institutions, professional associations, think tanks, or NGOs	21
Affiliation with political parties	7
Members of the Chinese People’s Political Consultative Conference or the National People’s Congress	3
Total	51

*Source:* The author’s calculation according to government documents and official websites. The sum of the numbers for each category is greater than 51 because one appointee can belong to more than one category.

**Table 3.** Openness and autonomy of ASBs

	Statutory bodies	Advisory bodies
Meeting agenda publicly available	33	40
Meeting minutes publicly available	33	34
Documents in meetings publicly available	25	21
Annual reports/work reports publicly available	40	42
Research reports publicly available	26	29
Chaired by government officials	25	55
Meetings open to public participation	14	5
Consult the public on policies or programs	23	28
Total	86	145

Source: Author's database. By March 2017, there were 470 advisory and statutory bodies. Only bodies whose terms of references include advising the executive government on policy or administrative matters are included.

**Table 4.** Four types of role perceptions of expert advisors

		View of value/interest contestation	
		Constraints for involvement in policymaking	Opportunities for involvement in policymaking
View of policy-relevant knowledge	Scientific and laypeople's knowledge	Pragmatic Problem Solvers (Type III)	Idealistic Knowledge Brokers (Type IV)
	Scientific knowledge	Technocrats (Type I)	Policy Entrepreneurs (Type II)

Council to change its policy stance and further open policymaking to public participation (Tsang et al. 2009; Cheung 2011; Yung and Chan 2011; Lam 2015; Lam and Chan 2017).

Expert advisors included in this study have access to the executive government to provide policy-related advice based on their expert knowledge. Given Hong Kong's centralized policymaking structure backed by an authoritarian sovereignty and relatively low public support for the government, we expect that these advisors take policymakers' preferences into account when providing advice, help policymakers to obtain public support, and refrain from openly criticizing government positions. With the Confucian ideal, however, some experts might still criticize government positions in a closed forum. Given limited public participation in policymaking, experts might not recognize laypeople's contribution to policy-relevant knowledge. When advising contested issues, we expect that some expert advice can comprise both scientific knowledge and values/interests.

#### 4. Method and Data

The Q method has been used to study human subjectivity, especially the viewpoints of specific groups in particular settings (Watts and Stenner 2012, p. 54). The Q method

gives respondents latitude to interpret the meanings of the items they rank based on their own behavioral contexts (Brown 1980, pp. 46–47).

This study selected a P-sample of 24 expert advisors. The aim of the sampling process was to explore the diverse views of expert advisors who share experiences in advising the Hong Kong government based on their expertise. They should be members of “expert communities for policy advising”, as defined by MacRae and Whittington (1997, pp. 1–4). We therefore identified the population according to two characteristics: the advisors have “expertise” thanks to their education, professional training, and practices, and have previously advised on policies for the Hong Kong government. To ensure diversity, we identified experts appointed to the ASBs managed by various departments and bureaus, and/or conducted government-commissioned policy research. They provided various types of expert advice to the government, ranging from program evaluation to solution analysis.<sup>9</sup> We also selected expert advisors with varied organizational affiliations: universities, NGOs, consulting companies, and private think tanks (see Durning and Osuna 1994; Hoppe 2009). The respondents belonged to different age and gender groups, and specialized in different policy domains (see Haas 1992; Radaelli 1999). We excluded public servants from the sample because they often utilize expert advice (Appendix III).

As McKeown and Thomas (2013, p. 32) caution, even with a diverse sample, a study probably cannot exhaust the whole range of viewpoints in the targeted population. Nevertheless, the Q study’s contribution is to establish the existence of viewpoints to help us better understand a category of people (Watts and Stenner 2012, p. 73).

It is suggested that the Q-set contains twice as many items as participants (Watts and Stenner 2012, p. 72). The statements in the Q-set were drawn from a parent population and presented to the respondents for sorting (Brown 1980, p. 28). We adopted a structured and deductive Q-set design (McKeown and Thomas 2013, p. 23). The Q-set should also be balanced and broadly representative of possible perspectives on the research question (Watts and Stenner 2012, pp. 58–59). As there were no similar Q studies in hybrid regimes, we constructed a parent population of 300 statements from the academic literature, newspapers and magazines, and local interviews. All statements in the parent population focused on roles of expert advisors in policymaking. To reduce the number of statements and maintain their diversity, we adopted a  $4 \times 4$  matrix to select 50 statements from the parent population.<sup>10</sup> To ensure a balanced representation of population statements, each grid of the matrix included three to four statements about different aspects of the research question.<sup>11</sup>

The matrix is used to identify statements that represent all important aspects of a discursive field (Hoppe 2009). The vertical dimension of the matrix is structured according to four types of political discourses identified by Dryzek and Berejikian (1993, p. 51).<sup>12</sup> The horizontal dimension comprises four aspects of expert advice that involve the tensions specified in Table 1:

1. Sources, composition, and production of expert advice;
2. Use or demand of expert advice by different clients and under different circumstances;
3. Strategies and approaches adopted by expert advisors to influence policy processes; and
4. Sources of credibility or legitimacy of expert advice.

The first aspect samples views on what constitutes expert advice, such as whether ordinary knowledge is a form of expertise (Liberatore and Funtowicz 2003; Collins and Evans 2007, p. 142), and whether expert advice involves uncertainty, plural norms, or political beliefs (Levidow and Carr 2007).

The second aspect concerns views about how expert advice is used or demanded by different clients in policymaking, such as policymakers (Peters and Barker 1993; Boswell 2009; Feldman and Ingram 2009) and the public (Renner 2004). The second aspect samples statements about the use of expert advice under different circumstances, such as crises and conflictual political contexts (Weible 2008; Lundin and Oberg 2014; Gluckman 2014).

The third aspect concerns perceptions about expert advisors' strategies and approaches to influence policy processes, such as screening interest groups' claims on policy agenda (Lomas and Brown 2009), exploiting the right timing (Fobe et al. 2013), persuading multiple players in policy processes (Dryzek 2002), framing issues (Liberatore and Funtowicz 2003), communicating scientific knowledge in plain language (Hickey et al. 2013), and managing tension between providing professional skills and being loyal to the government (Hoppe 2009).

The last aspect focuses on perceptions about sources of credibility or legitimacy of expert advice in policymaking, such as its political relevance (Boswell 2009), objectivity and impartiality (Radin 2015), scientific basis or discipline (Maasen and Weingart 2005), experts' institutional affiliation (Brickman and Rip 1979; Barke and Jenkins-Smith 1993), public judgment (Nowotny 2003), and relevance to local communities (Fischer 1993).

The sorting process was as follows. The respondents were presented with the following research question: "What is the role of expert advice in policymaking?" They were then invited to sort the 50 statements according to a +5 (most strongly agree) to -5 (most strongly disagree) semi-normal distribution. We asked them to sort the statements based on their experiences in advising the Hong Kong government. They were advised to follow a two-step sorting procedure: first, putting all of the statements into three provisional categories: disagree, agree, and neutral; and second, positioning the statements of each category in the grid (Watts and Stenner 2012). All of the respondents read the statements at least twice. After their second reading, 12 respondents moved a few statements from one category to another. The sorting process lasted for about 20–30 minutes on average. Subsequently, the respondents were invited to comment on the statements displayed under the scores +5, +4, -4, and -5, and those displayed as "neutral". The respondents were then invited to elaborate their views on four open-ended questions based on their experiences of advising the Hong Kong government (Appendix VI). After the interview, each respondent was invited to complete a questionnaire about their educational, professional, and political background (Appendix VII). The interviews lasted for 1.5 hours on average. Twenty-three interviews were carried out in Chinese and one interview was carried out in English. The interviews were conducted from March to June 2016.

## **5. Findings**

The Q sorts were correlated and factor analyzed using the PQ-Method software package. The factors indicated clusters of respondents who ranked the statements similarly and



thus shared attitudes (Brown 1980, p. 6). Four factors were extracted using principal component analysis (PCA) and varimax rotation.<sup>13</sup> The factor matrix with an X, indicating a defining sort, is given in [Appendix V](#). The correlations between the factors were relatively low ([Appendix IV](#)), indicating that each factor was distinct.

We first identified five consensus statements<sup>14</sup> that indicated experts' professional norms and shared understanding of the role of science in politics. The experts agreed that expert advice should have a scientific basis (S19), but they generally disagreed that concepts, models, or storylines originating in science are the glue in political compromise (S37). They tended to agree that elected politicians can be swayed by voters or constituents when using scientific knowledge (S43).

Although the Q method does not aim to test the association between factor type and other variables, we do not find any association between types of experts' role perceptions and policy domains or the part of government they advise. In the following sections, we elaborate on the experts' varied perceptions based on the factor scores and the respondents' interpretations of the statements.

### 5.1. *Type I: Technocrats*

Type I experts were "technocrats", the largest factor, defined by 11 respondents.<sup>15</sup> Their expertise in policy domains ranged from climate change science to social services. Most, but not all, of these Type I experts had been appointed to ASBs supported by government bureaus and/or departments. These experts included university and private think tank researchers, an NGO manager, and a private consultant (see [Appendices III and V](#)). Experts of this type resembled "technicians" for whom "politics is someone else's business", as described by Meltsner (1976, p. 18).

The technocrats believed that expert advice could improve decision-making by eliminating decision-making's non-scientific basis (S33, +4). A private consultant believed that experts should base their advice on data analysis and facts rather than opinions.<sup>16</sup> The Type I experts did not think highly of laypeople's contribution to policy discussions (S29, -2).

The technocrats also believed in a clear division of labor between experts and politicians in view of politicians' low public credibility (S27, +4). They also agreed that in contexts of high political division, expert advice should be provided by independent and competent institutions (S18, +4), and expert advisors should rise above politics and stick to facts (S32, +5). They believed that it is not appropriate for experts to seek to persuade multiple players in policy processes (S4, -5), and that it is not necessary for experts to gain the trust of the public, the media, policymakers, politicians, and the science community (S20, -3). One university researcher commented, "It is politicians' responsibility to persuade people, not experts".<sup>17</sup> A university architect refrained from publicly commenting on controversial political issues related to urban planning.<sup>18</sup>

Probably because of their distance from politics, experts of this type did not find it difficult to remain loyal to the government when providing professional skills (S36, -4).

### 5.2. *Type II: Policy Entrepreneurs*

Four Type II experts were identified.<sup>19</sup> Like Type I experts, they had expertise in diverse policy domains, ranging from social security to public health. All had been appointed to

the ASBs supported by government bureaus and/or departments. Three were university researchers and one was an NGO manager. These Type II experts resembled “policy entrepreneurs”, as described by Kingdom (1995), in that they had both expert knowledge and political knowledge to influence policies.

In contrast to Type I experts, Type II experts strongly agreed that experts must sustain the trust of the public, the media, policymakers, politicians, and the science community (S20, +5). They disagreed that public trust can be earned and maintained only if experts act as knowledge brokers, rather than as advocates (S9, -4). They agreed that to impact policy, experts need to remain attuned to timing and ready to exploit the policy window (S38, +3). One university researcher perceived his role as follows: “On the one hand, I am a researcher. On the other hand, I regard myself a political actor, a stakeholder who participates in the political game. ... If you are purely a researcher, your impact on policy is limited.”<sup>20</sup>

Type II experts perceived a blurred boundary between science and values (S25, +4). Unlike other experts, they strongly disagreed that expert advice is more likely to be disregarded by policymakers if it includes subjective criteria (S30, -4). “Science is objective, but it will not lead to social justice”, said an NGO leader<sup>21</sup> who had once sought to be elected a legislator. Such a perception is consistent with the expectation about the composition of expert advice on contested issues in Hong Kong. However, like Type I experts, Type II experts disagreed that laypeople could open up issues that experts would not otherwise explore (S29, -1).

Contrary to the general understanding of government-appointed expert advisors' roles in non-democratic contexts, Type II experts would not blindly endorse policy options preferred by policymakers. They considered it incorrect for the government to cherry-pick the findings of research to justify its policy decisions (S21, +3). Type II experts found it difficult to remain fully loyal to the government when providing professional skills (S36, +5). A former chair of a government advisory council on environmental assessment explained that if the council always agreed with the government's position, it would lose public credibility.<sup>22</sup> Another university researcher explained that he was able to influence social security policies because he was trusted by the government as a leading expert in the sector. However, he did not perceive himself a “yes man” who simply said what the government wished to hear.<sup>23</sup>

### *5.3. Type III: Pragmatic Problem Solvers*

Three respondents were Type III experts: the pragmatic problem solvers.<sup>24</sup> They specialized in different policy domains, including social innovation, nature conservation, and economic policy. All had been appointed to the ASBs supported by government bureaus and departments. One was a university researcher, and two were NGO consultants.

Type III experts thought expert advisors should persuade multiple players in policy processes (S4, +3). They would provide advice that takes into account the interests of citizens who are not represented by polarized or dominant parties.<sup>25</sup>

Despite their efforts to impact policymaking, Type III experts felt that there should be clear division of labor between experts and policymakers in policymaking (S49, +4). They perceived that expert advisors were somewhat constrained from free expression due to value/interest contestation,<sup>26</sup> sometimes involving the Chinese and Hong Kong

governments.<sup>27</sup> Their strategies to influence policies accounted for these constraints and were pragmatic. They were aware that experts had their own interests (S42, +3) and value conflicts could occur between experts (S3, +4). Nonetheless, they believed that experts should focus on enhancing the demand for and the supply of evidence for public policy (S7, +5) and solve societal problems. An NGO consultant appreciated that Hong Kong's relatively liberal political environment (compared to China), enabled individuals to speak with some freedom and honesty. He still recognized the government's demand for his loyalty. He chose to provide critical advice within the forum of government ASBs but did not openly criticize government positions. He was once privately consulted by the Chinese central government office in Hong Kong over whether people should be forbidden to demonstrate in the street. He advised that people be allowed to do so on the basis of his knowledge of sociology. He believed that "experts should hide their value judgments and provide objective assessments".<sup>28</sup>

Similarly, a university researcher perceived that experts should provide objective and rational scientific analysis and avoid making value-based judgements. When advising on politically controversial issues such as standard working hours, he based his analysis on the scientific data, and remained politically neutral, supporting neither employees nor employers.<sup>29</sup>

#### 5.4. *Type IV: Idealistic Knowledge Brokers*

We identified four Type IV experts (idealistic knowledge brokers<sup>30</sup>), who specialized in education, organic farming, media, and social welfare. Three were university researchers appointed to the ASBs supported by government bureaus and/or departments. One was a private think tank researcher who was not appointed to the government ASBs but had conducted policy research commissioned by the government bureau.

Like Type III experts, Type IV experts perceived it as possible to provide independent and critical advice directly to the government.<sup>31</sup> Compared to Type III experts, they were more confident of the potential for expert knowledge to influence policies, such as framing policy issues and formulating policies (S26, +5), identifying the middle ground between polarized policy options (S11, +5), and helping policymakers choose policies (S49, -3). In this sense, Type IV experts are idealists.

Like Type II experts, Type IV experts perceived that expert advisors should seize political opportunities to impact policies (S38, +4). Unlike Type II experts, however, Type IV experts perceived that expert advice is more likely disregarded by policymakers if it includes subjective criteria (S30, +3). They interpreted "subjective criteria" as biases in favor of sectoral interests or political preferences.<sup>32</sup>

Like Type III experts, they noted the polarized and conflicted debates in Hong Kong society.<sup>33</sup> However, Type IV experts were not concerned that getting involved in policymaking could harm their public credibility (S27, -3), probably because they perceived their roles in policymaking as "objective" knowledge brokers between the public and policymakers. One university researcher believed that expert advice should offer "golden mean" policy options that benefit the community as a whole.<sup>34</sup> Rather than relying on policymakers to incorporate scientific knowledge into political decision-making (S45, -5),<sup>35</sup> Type IV experts believed that expert advisors are responsible for making scientific knowledge understandable to lay-people (S14, +3). This perception is consistent with the expectation that experts will help

policymakers to obtain public support. They also acknowledged citizens' contributions to policy-relevant knowledge (S12, +3).

## **6. Discussions and Conclusion**

Inspired by the typology of science advisors according to their views about science and democracy proposed by Pielke (2007), this paper categorizes four types of expert advisors in Hong Kong according to two dimensions (Table 4). The first dimension characterizes expert advisors based on their view of policy-relevant knowledge. In Hoppe's study, the Dutch expert advisors all rejected the statement that laypeople's and practitioners' knowledge was less valuable than scientific knowledge (2009). In contrast, Type I and Type II experts in Hong Kong were skeptical about laypeople's contribution to policy-relevant knowledge, which is consistent with our expectation. Type III and Type IV experts tended to agree that laypeople's and citizens' knowledge contributes to policy-relevant knowledge (S12, S29).

The second dimension differentiates expert advisors based on their view of how value/interest contestation affects experts' involvement in policymaking. Unlike science advisors in democratic systems who have choices about how they engage policy and politics (Pielke 2007, p. 152), Type I and Type III experts in Hong Kong perceived that expert advisors' choices are constrained by political context. Type I and Type III experts prefer limited involvement in policymaking (S38, S49). Type I experts' concern is how to safeguard experts' public credibility vis-à-vis that of politicians (S27) and maintain their independence in contexts of political division (S18). Type III experts' concern is that value/interest contestation could bias their analysis and distract them from solving societal problems.

Type II and Type IV experts believe that expert advisors should seize political opportunities to impact policy (S38, S6) and assist policymakers choosing policy options (S49).

Like "issue advocates" in democratic systems (Pielke 2007), Type II experts advocate for preferred policy options (S9). Unlike "issue advocates" who advance political interests through science (Pielke 2007), Type II experts do not believe that scientific knowledge should be used to serve stakeholders' interests (S24). Instead, to impact policies, they believed that expert advice should include subjective criteria (S30) and be independent from the government (S18) even when that advice differs from government preferences (S36, S21). For these experts, the major value contestation is between the government and the public. This view is contrary to our expectation that experts in a non-democratic regime will not openly challenge government positions to influence policymaking, but it is consistent with the Confucian role of scholars as being critical of political authorities who fail to uphold humanity (Ackerly 2005).

Unlike Type II experts, Type IV experts believed that as "objective" knowledge brokers between scientists, policymakers, and the public (S14; S30; S9), expert advisors can identify policy options that go beyond polarized ones (S11) and hence reduce political division. In this sense, Type IV experts are like "Honest Brokers of Policy Options" in democratic contexts, who seek to widen policy alternatives available to decision-makers (Pielke 2007, p. 17). Compared to "Honest Brokers", Type IV experts prefer to be more involved in policymaking (S49).

In a highly conflicted political environment, four types of experts in Hong Kong shared the following views. First, the public credibility of expert advice comes from

its scientific basis (S19). Second, expert advice's authority does not derive from its political relevance (S16). Third, scientific knowledge alone cannot be the glue in political compromise (S37). These lessons are useful for expert advisors to manage tensions between science and politics over contested issues across political systems (Weible and Sabatier 2009; Ingold and Gschwend 2014).

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## Notes

1. At present only 40 of 70 legislators are popularly elected, and the remaining 30 legislators are elected by much smaller constituencies (<https://www.voterregistration.gov.hk/eng/statistic2018.html>).
2. Basic Law, Article 62 and 73 ([https://www.basiclaw.gov.hk/en/basiclawtext/chapter\\_4.html](https://www.basiclaw.gov.hk/en/basiclawtext/chapter_4.html)).
3. Electoral Affairs Commission. Report on the 2017 Chief Executive Election ([https://www.eac.hk/pdf/chief/en/2017\\_CE\\_Report/2017ce\\_full\\_report.pdf](https://www.eac.hk/pdf/chief/en/2017_CE_Report/2017ce_full_report.pdf). Accessed April 24, 2019).
4. Eight university professors were appointed as principal officials from 2002 to 2018.
5. Over 80% of R&D expenditure by the higher education sector in Hong Kong, which produces both basic and applied knowledge for policy research, was funded by the government, amounting to 8,486 million HKD in 2016. Other government sector funding schemes for R&D amounted to 914 million HKD (Task Force on Review of Research Policy and Funding, 2018, <https://www.ugc.edu.hk/doc/eng/ugc/publication/report/report20180606/invitation.pdf>).
6. Interview 17LD, April 27, 2016. Only 5 of 30 non-governmental think tanks in Hong Kong were ranked as among the most influential regionally and internationally, according to the 2017 Global Go To Think Tank Index Report ([https://repository.upenn.edu/cgi/viewcontent.cgi?article=1012&context=think\\_tanks](https://repository.upenn.edu/cgi/viewcontent.cgi?article=1012&context=think_tanks)). Only two of the five top think tanks (Civic Exchange and Lion Rock Institute) published their revenue in 2016, which amounted to 9.24 million HKD and 1.719 million HKD, respectively. See also "Five Hong Kong think tanks make it to list of region's top 90", *South China Morning Post*, February 27, 2017 (<https://www.scmp.com/news/hong-kong/education-community/article/2074127/five-hong-kong-think-tanks-make-it-list-regions>).
7. When we collected interview data for this study, more than 71% of 717 respondents perceived Hong Kong's political conflict to be serious (The Chinese University of Hong Kong, March 2016).
8. In the 2001 Asian Barometer Survey conducted in Hong Kong, 64.5% of respondents somewhat disagreed and 9.2% strongly disagreed with the statement "we should get rid of parliament and elections and have the experts decide everything". In the 2012 Asian Barometer Survey, 44.2% of the respondents disagreed and 37.9% strongly disagreed with a similar statement (<http://www.asianbarometer.org/intro>).
9. Although government departments and policy bureaus focus on different aspects of policy-related work, the type of commissioned policy research is not necessarily correlated with the type of commissioning government agency. In one case, a policy research study was commissioned by the department and the funding was approved by the policy bureau (Interview 12HZ, April 5, 2016; Interview 4ZY, March 11, 2016).
10. If the number of statements were too large, it would be too time-consuming and difficult for the participants to sort the statements.
11. Each grid of Appendix I provides the serial number of each statement and the total number of statements. The wordings of the statements are provided in Appendix II.
12. These four types concern the meanings of the terms (definitive), questions of fact (designative), the worth of something that does or could exist (evaluative), and something that should or should not exist (advocative).

13. The PCA showed that eight factors had eigenvalues above 1.00. The eight-factor solution (PCA and varimax rotation) accounted for 71% of the overall variance, but had only ten significantly loading Q sorts. We then compared seven-factor, six-factor, five-factor, and four-factor solutions, and decided to extract four factors, because the solution explained 50% of the overall variance, and had 22 significantly loading Q sorts, which was more than other solutions (see Watts and Stenner 2012, pp. 197–199).
14. S8, 19, 37, 43, and 47 did not distinguish between any pairs of factors. All of these statements were non-significant at  $P > 0.01$ . Statements 37, 43, and 47 were also non-significant at  $P > 0.05$ . The wordings of these statements and those quoted in the rest of the paper can be found in Appendix II.
15. The distinguishing statements included S18, S33, S27, S35, S34, S48, S20, and S3, significant at  $P < 0.01$ ; and S32, S15, S36, and S4, significant at  $P < 0.05$ .
16. Interview 11LJ, March 30, 2016.
17. Interview 18XY, April 28, 2016.
18. Interview 9HP, March 24, 2016.
19. For Type II experts, the distinguishing statements included S36, S20, S25, S21, S23, S32, S9, and S30, significant at  $P < 0.01$ ; and S27, S49, and S2, significant at  $P < 0.05$ .
20. Interview 4ZY, March 11, 2016.
21. Interview 13HY, April 6, 2016.
22. Interview 16LJ, April 23, 2016.
23. Interview 4ZY, March 11, 2016.
24. The distinguishing statements included S7, S3, S4, S40, S39, S18, and S44, significant at  $P < 0.01$ ; S42 and S28, significant at  $P < 0.05$ .
25. This was confirmed by their recognition of citizens' contribution to policy-relevant knowledge (S12, +3; S29, +1) and their appreciation that good policy solutions should fulfill societal needs. Interview 6MJ, March 15, 2016; Interview 3ZT, March 7, 2016.
26. They were aware of the contested values and political division involved in many issues (S3, +4; S18, -2).
27. Some were aware that their advice was expected to justify the government's predetermined position. Interview 6MJ, March 15, 2016. Interview 5LC, March 14, 2016.
28. Interview 6MJ, March 15, 2016.
29. Interview 3ZT, March 7, 2016.
30. The distinguishing statements included S26, S11, S34, S30, S28, S16, S21, S22, S45, significant at  $P < 0.01$ ; and S14, S24, S31, S49, and S2, significant at  $P < 0.05$ .
31. Interview 24NX, May 18, 2016; Interview 2ZS, March 4, 2016; Interview 19FY, May 2, 2016.
32. Interview 24NX, 2ZS and 19FY.
33. Interview 1FZ, 2ZS, 19FY and 24 NX.
34. Interview 2ZS, March 4, 2016.
35. Interview 2ZS, March 4, 2016.

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**Appendices**

**Appendix I.** The Q-set

	<b>Supply of expert advice</b>	<b>Demand of expert advice</b>	<b>Influence of expert advice on policy processes</b>	<b>Credibility/legitimacy for expert advice</b>
Definitive	3 (S12, S25, S39)	4 (S34, S22, S46, S5)	3 (S7, S17, S49)	3 (S16, S44, S19)
Designative	3 (S41, S13, S47)	3 (S21, S23, S43)	3 (S3, S36, S15)	3 (S27, S24, S31)
Evaluative	3 (S2, S42, S29)	3 (S30, S37, S48)	4 (S50, S26, S10, S8)	3 (S1, S40, S9)
Advocative	3 (S14, S35, S18)	3 (S28, S45, S32)	3 (S33, S38, S4)	3 (S11, S20, S6)

**Appendix II.** Factor scores

	<b>Type I</b>	<b>Type II</b>	<b>Type III</b>	<b>Type IV</b>
S1. When experts in the same discipline have divergent opinions on the same issue, their advice will not be publicly credible, people will suspect whose interest they are speaking for respectively.	-3	-2	0	-1
S2. Uncertainty about policy advice can be reduced if disagreement among experts is minimized.	0	-2	1	-4
S3. If there are divergent views among experts, the fundamental disagreement is about policy goals and values.	-4	-1	4	-1
S4. Policy process involves multiple players. Experts shall persuade these players rather than just inform them.	-5	-1	3	-3
S5. When crisis happens, what the public needs is clear and consistent communication of the knowns and unknowns by the experts.	3	1	2	0
S6. Experts shall not disturb the electoral process, so as to gain the trust of the elected leaders and thus maintain potential for influence.	2	-2	2	-2
S7. The role of expert advisor is often less about providing direct technical expertise than it is about nudging attitudes and practices to enhance both the demand for and the supply of evidence for public policy.	-1	-1	5	-1
S8. If policy options are suggested by experts, rather than by the government, these options will be more likely to be accepted by the public.	0	0	-1	-1
S9. Public trust can be earned and maintained only if experts act as knowledge brokers, rather than as advocates.	0	-4	-1	1

(continued)

**Appendix II.** *(Continued)*

	Type I	Type II	Type III	Type IV
S10. Scientific knowledge is more likely to influence policy if it is communicated in plain and common language that is understandable by policymakers without a scientific background.	3	4	2	0
S11. Persuasive expert advice shall not only give two polarized policy options, but also those in the middle, and shall offer detailed explanation about both the positive and negative consequences of each policy option.	3	0	1	5
S12. Scientific knowledge is a crucial but not exclusive form of policy-relevant knowledge. Citizens are at the same time, though to different degrees, users, critics, and producers of policy-relevant knowledge.	1	1	3	3
S13. The development of technology and science is at such a rapid pace that despite being an expert on certain issues, if the expert does not pay attention to and get involved in scholarly discussions, but only relies on knowledge and other people's experiences acquired many years ago, their opinions will very likely be outdated or wrong.	1	1	4	2
S14. The experts must know how to reach out to scientists for the appropriate expertise, and help them to enact their social responsibility in making their knowledge accessible and understandable, and in being more self-aware about when they might be acting as advocates.	0	0	0	3
S15. It is not for nothing that conflicts or inconsistencies of expert advice frequently run parallel to boundaries between departments, agencies, or other bureaucratic units.	2	-1	-3	0
S16. The authority of expert advice largely derives from its political relevance.	-5	-5	-5	-2
S17. I have come to understand that the primary functions and greatest challenges for an expert advisor are providing advice not on straightforward scientific matters, but instead on issues that are urgent and of high public and political concern.	-1	2	1	0
S18. In a politically divided context, expert advice shall be provided by independent and competent institutions.	4	2	-2	1
S19. If expert advice is based upon clear theoretical assumption and rigorous data analysis, not on slogans, it will have more public credibility.	5	4	3	3
S20. The experts must sustain in parallel the trust of the public, the media, policymakers, politicians, and the science community.	-3	5	2	2
S21. The government often incorrectly cherry-picks the findings of my research and other experts' research to justify its policy decisions.	0	3	-1	-4
S22. The use of expert knowledge increases with scientific progress.	-1	-1	0	-4
S23. Many people use expert advice to simply confuse the public discourse.	-3	1	-3	-3
S24. Knowledge becomes a tool, something "serviceable", which offers a certain degree of scientific acceptability, but more surely, the assurance to stakeholders that their interests are not being sacrificed to an impossible scientific certainty.	-2	-3	0	2

*(continued)*

Appendix II. (Continued)

	Type I	Type II	Type III	Type IV
S25. Expert advice provides fact, not only fact about science and technology, but also fact about views, values, and development in society.	-1	4	0	1
S26. Expert knowledge is a major asset allowing for involvement in framing issues for policy attention and in designing options.	2	1	1	5
S27. Public regard for experts remains particularly high, and for politicians it is particularly low. Blurring the boundaries between these groups is not likely to redound to the benefit of politicians, but to the detriment of experts.	4	0	-2	-3
S28. What politicians and society expect from science is changing rapidly, and science must change with it, or risk losing public support.	-4	-5	-2	0
S29. It is often laypeople's questions which open up issues that experts might not otherwise have explored.	-2	-1	1	0
S30. Expert advice will more likely be disregarded by policymakers if it includes subjective criteria.	-1	-4	0	3
S31. Experts of high public credibility may avoid being attacked by radicals and accused of betraying ordinary people, even if they compromise with government positions.	-3	-3	-3	0
S32. Expert advisors shall rise above the politics and stick to the facts.	5	0	5	4
S33. Politicians need expert advice so that they do not rely on hearsay, conspiracy theories, or rumors, to make decisions concerning the welfare and livelihoods of millions.	4	0	-1	1
S34. The rapidly growing demand for expert advice is largely in response to the need to address the grand challenges facing society or to deliver a knowledge-based economy.	1	-3	-4	4
S35. It is admirable that experts translate vague and inchoate political ideas and ideals into transparent models, and objectify them into measurable indicators.	1	-4	-4	-1
S36. As an expert advisor, I experience difficulties working for the government, as government honors and needs my professional skills, but simultaneously demands my full loyalty.	-4	5	-2	-2
S37. Most of the time it is concepts, models or story lines originating in science that are the glue in political compromise, the pragmatic ties holding coalitions together.	-2	-3	-3	-2
S38. In order to impact policy, experts need to remain attuned to timing and be ready to exploit the occasional window of opportunity when it opens.	0	3	1	4
S39. There is often divergent expert advice on politically contested issues.	2	3	-1	2
S40. If expert advice is based upon knowledge from various disciplines and is policy-relevant, such advice has more public credibility.	2	2	-1	2
S41. People – including experts – interpret the real-world implications of science in terms of their cultural background, personal experience and political beliefs.	-2	3	2	-1
S42. Experts in a way make the mistake of not being completely transparent about their own interests.	-1	1	3	-1

(continued)

**Appendix II. (Continued)**

	Type I	Type II	Type III	Type IV
S43. When using scientific knowledge, elected politicians can be swayed by second-guessing what voters might think, or want, and claim to be representing the wishes of their constituents.	1	2	1	1
S44. The public has a high regard for expert advice largely because of experts' institutional positions or rankings.	1	2	-4	1
S45. To integrate more science into political decision-making, the immediate priority is to improve policymakers' skills to enable them to intelligently interrogate expert advisors and to understand the quality, limitations, and biases of evidence.	0	-2	0	-5
S46. The use of scientific knowledge in policymaking will be increased to a greater extent when experts focus on what is needed by decision-makers.	-1	-2	-5	-5
S47. Experts may shape and limit transparency of policy advice by "back-staging some bits of information" while "front-staging others".	0	0	-2	-2
S48. In crisis, one-to-one relationship between experts and senior members of the executive government is essential to encourage the better use of scientifically derived evidence.	-2	1	0	1
S49. Expert advice is about presenting a rigorous analysis of what we do and do not know. Choosing between policy options with different trade-offs is not the domain of an expert advisor but of policymakers and elected officials.	3	-1	4	-3
S50. Expert's advice helps screen the validity of interest groups' competing claims on the policy agenda.	1	0	-1	0

**Appendix III. Background of sampled expert advisors**

	Expertise	Education	Age group	Institution affiliation	Advisory experiences for Hong Kong government
1FZ	Education, international relations	Master	Below 35	Researcher, think tank	Government-commissioned (e.g. policy bureau and statutory body) policy research
2ZS	Mushroom cultivation, organic farming	PhD	46-55	Researcher, university	Government-commissioned (e.g. department) policy research Member and chair of advisory bodies affiliated with government department and bureau. Member of a governmental statutory body

*(continued)*

Appendix III. (Continued)

	<b>Expertise</b>	<b>Education</b>	<b>Age group</b>	<b>Institution affiliation</b>	<b>Advisory experiences for Hong Kong government</b>
3ZT	Economic policy	PhD	46–55	Researcher, university	Government-commissioned (e.g. department) policy research Member of advisory bodies affiliated with government department and bureau Advisor of a government think tank
4ZY	Social security and social policy	PhD	Over 65	Researcher university	Government-commissioned (e.g. department, bureau and the Central Policy Unit) policy research Member and chair of advisory bodies affiliated with government department and bureau Chair of a governmental statutory body Advisor of private and government think tanks
5LC	Environment, geography, nature conservation	Master	Over 65	Former civil servant, consultant of NGO	Member and chair of advisory bodies affiliated with government department and bureau Advisor of NGOs and government think tank
6MJ	Elderly and social enterprise, social innovation	Bachelor	56–65	Consultant, NGO	Member of advisory and statutory bodies affiliated with government department and bureau Advisor of NGOs and government think tank
7LY	Climate change	PhD	56–65	Researcher, university	Member of advisory body affiliated with government department
8YJ	Social enterprise, social services	Master	36–45	Manager, NGO	Member of advisory bodies affiliated with government bureaux Chair of a statutory body Advisor of private and government think tanks Advisor of NGOs
9HP	Built environment	PhD	56–65	Researcher, university	Member and chair of statutory and advisory bodies affiliated with government department

(continued)

**Appendix III.** *(Continued)*

	<b>Expertise</b>	<b>Education</b>	<b>Age group</b>	<b>Institution affiliation</b>	<b>Advisory experiences for Hong Kong government</b>
10PH	Environment and energy	PhD	Over 65	Researcher, university	Chair and member of statutory and advisory bodies affiliated with government bureau and department Advisor of NGOs and government think tank
11LJ	Innovation and technology	PhD	56–65	Consultant, company	Advisor of NGOs, private and government think tanks Member of a governmental statutory body
12HZ	Public health, environment health	Master	Over 65	Researcher, university	Member of advisory bodies affiliated with government department and bureau Government-commissioned (e.g. government department) policy research
13HY	Technology, innovation and education	Bachelor	46–55	Chief Executive, NGO	Member of advisory bodies affiliated with government bureau Advisor and leader of NGOs
14LZ	Social political development and comparative politics	PhD	Over 65	Researcher, university	Former head of a governmental think tank Member of advisory bodies affiliated with government bureau
15NK	Environment and transport	Master	46–55	Researcher, think tank	Government-commissioned (e.g. Central Policy Unit) policy research
16LJ	Environmental policy, environmental noise, environmental assessment	PhD	Over 65	Researcher, university	Advisor and leader of NGOs Chair and member of statutory and advisory bodies affiliated with government department and bureau Government-commissioned policy research
17LD	Economics and population policy	PhD	56–65	Researcher, university	Advisor of a private think tank Member of advisory and statutory bodies affiliated with government bureau and department Government-commissioned policy research

*(continued)*

**Appendix III. (Continued)**

	<b>Expertise</b>	<b>Education</b>	<b>Age group</b>	<b>Institution affiliation</b>	<b>Advisory experiences for Hong Kong government</b>
18XY	Transport and environment policy, vehicle emissions, pavement noise, transport planning	PhD	56–65	Researcher, University	Member of a private think tank Chair and member of statutory and advisory bodies affiliated with government bureau and department Leader of NGOs Government-commissioned policy research
19FY	Media policy, youth policy, creative industries	PhD	36–45	Researcher, university	Government-commissioned policy research Member of advisory and statutory bodies affiliated with government bureau and department Advisor of NGOs
20LZ	Waste management, energy, air pollution	High diploma	56–65	Chief Executive, NGO	Member of advisory bodies affiliated with government department and bureau Leader and advisor of NGOs
21WL	Environmental protection	Diploma	46–55	Chief Executive, consulting company	Member of advisory bodies affiliated with government department and bureau
22LD	Health	PhD	56–65	Researcher, university	Leader and advisor of NGOs Member of advisory bodies affiliated with government department and bureau Government-commissioned (e.g. government bureau and Central Policy Unit) policy research
23MF	Rehabilitation	PhD	56–65	Researcher, university	Advisor of NGOs Member of advisory bodies affiliated with government department
24NX	Social welfare, youth, population	PhD	56–65	Researcher, university	Government-commissioned policy research Member of advisory bodies affiliated with government bureau Member of statutory bodies



**Appendix IV.** Correlations between factor scores

	1	2	3	4
1	1.0000	0.2410	0.2092	0.3831
2	0.2410	1.0000	0.3037	0.2088
3	0.2092	0.3037	1.0000	0.2493
4	0.3831	0.2088	0.2493	1.0000

**Appendix V.** Factor matrix with an X indicating a defining sort

QSORT	Loadings			
	1	2	3	4
1FZ	0.3119	-0.0979	0.3014	<b>0.3756X</b>
2ZS	0.1829	0.0168	0.0358	<b>0.6300X</b>
3ZT	0.0588	0.2123	<b>0.5166X</b>	0.1796
4ZY	0.0431	<b>0.6885X</b>	0.1106	-0.1108
5LC	0.1941	0.3577	<b>0.7113X</b>	-0.0725
6MJ	-0.0083	-0.0844	<b>0.6688X</b>	0.2099
7LY	<b>0.4286X</b>	0.0828	0.1161	0.3653
8YJ	<b>0.5143X</b>	0.0186	0.2960	0.3394
9HP	<b>0.7011X</b>	0.0599	0.1633	0.0712
10PH	0.5910	0.1272	0.5062	0.0645
11LJ	<b>0.6728X</b>	-0.0789	0.0796	0.3057
12HZ	<b>0.6781X</b>	0.2464	0.0818	0.1005
13HY	-0.1157	<b>0.6753X</b>	-0.0016	0.3474
14LZ	<b>0.3826X</b>	0.3012	0.3232	-0.0196
15NK	<b>0.6393X</b>	0.3308	-0.1214	0.2195
16LJ	0.0080	<b>0.5706X</b>	0.1893	0.1006
17LD	<b>0.8291X</b>	0.1333	-0.0734	0.0289
18XY	<b>0.5509X</b>	0.2470	-0.3811	0.3747
19FY	0.2457	0.0829	-0.0016	<b>0.7043X</b>
20LZ	0.3097	0.4177	0.0801	0.3951
21WL	<b>0.5347X</b>	-0.0245	0.1493	0.0468
22LD	0.1927	<b>0.7034X</b>	-0.0160	-0.0610
23MF	<b>0.7489X</b>	-0.1218	-0.0015	0.1357
24NX	0.0283	0.0483	0.2388	<b>0.6931X</b>
% expl. var.	21	10	9	10
Total 50%				

**Appendix VI. Open-ended questions**

1. According to your experiences and observation in daily advisory activities for the Hong Kong government, what constitutes expert advice and expert advisory activities?
2. Where do you think the policy-relevant knowledge should come from, scientists, non-governmental or governmental experts, laypeople, or somebody else? Do you think about what institutions expert advice should come from, inside the government,

government-appointed advisory bodies, consultant companies, think tanks, universities, political parties, or somewhere else? Why do you think so?

3. According to your own experiences and observations, when will the use of scientific knowledge and expert advice be increased in policymaking?
4. Do you think about what role experts and expert advice should play in relation to other types of actors and advice in policy processes, namely agenda setting, policy formulation, policy decision, policy implementation, and policy evaluation?

**Appendix VII. Interviewee background questions**

1. Which policy areas do you consider yourself as an expert of? (You may mention more than one policy area.)
2. Could you please tell us about the professional and academic qualifications and training that you have obtained?
3. Please list the professional or voluntary bodies that you are an active member of or of which you assume a leadership role.
4. Could you please tell us your experiences of advising the Hong Kong government?
5. Please circle the age group you belong to:  
(1) Below 35; (2) 36–45; (3) 46–55; (4) 56–65; (5) Over 65
6. Political party affiliation (if any) \_\_\_\_\_