

Research Assessment Exercise 2020
Impact Case Study

University:	Hong Kong Baptist University
Unit of Assessment (UoA):	21 – Economics and Finance
Title of Case Study:	Forecasting Economic Policy Uncertainty in Greater China
(1) Summary of the impact	
<p>Novel economic policy uncertainty (EPU) indices for Mainland China, Hong Kong and Macao were constructed and shown to forecast the macroeconomic outlook. These indices have been used by the Hong Kong Monetary Authority, the Hong Kong Government Economist, and the Monetary Authority of Macao to enhance economic assessment, forecasting and surveillance. Evidence further shows broad impact across local and international financial institutions. They incorporate the EPU indices to identify and quantify market sentiments, predict future macro-variables, improve investment decisions and explain risk to clients. In addition, free online accesses to the EPU and media coverage have raised public awareness about economic uncertainty.</p>	
(2) Underpinning research	
<p>Paul Luk (Assistant Professor at HKBU since 2015) has been working on empirical and theoretical research regarding the transmission of uncertainty shocks in closed and open economies.</p> <p>Luk et al. (1) and Huang et al. (2) adapted the text-mining technique of Baker, Bloom and Davis (2016) to Chinese-language newspapers, and used this innovative method to compile and continuously update the first economic policy uncertainty (EPU) indices for Hong Kong (from 1998) and Mainland China (from 2000). The method involves counting the number of newspaper articles that satisfy certain compound keyword search criteria related to uncertainty. The resulting monthly indices capture real and financial uncertainty and are easy to understand. Moreover, these indices are shown to forecast key macroeconomic and financial variables better than existing indicators such as the realized volatility of equity market indices.</p> <p>On the theoretical side, Luk [(3), (4) & (5)] established links between uncertainty shocks and the macroeconomy. This line of research suggests that a good measure of uncertainty can enhance economic forecasting. Specifically, Luk (3) show that shocks (including uncertainty shocks) can propagate across country borders through global banks. Luk (4) further considers policy options for a small open economy when it is subject to foreign uncertainty shocks. It stresses that there is a monetary policy tradeoff between maintaining macroeconomic and capital flow stability, and suggests that macro-prudential or capital account policies may be used to supplement monetary policy.</p> <p>Luk and Zheng (5) study the role of uncertainty shocks in a closed economy. The research team focuses on the interactions between uncertainty shocks and financial frictions and demonstrates that the amplification of uncertainty shocks depends crucially on the type of financial contracts modelled in the economy.</p>	

Given Luk's expertise in transmission of uncertainty shocks in small open economies, he was invited to participate in related policy research with Hong Kong Monetary Authority (HKMA) staff. The work was published as an HKMA Research Memorandum (6). In the policy analysis, Luk and his team point out that, given Hong Kong's small open economy, there are notable spillovers of uncertainty from major trading partners to Hong Kong, and that uncertainty constitutes another channel of international spillovers from the external environment. The paper demonstrates that the EPU index significantly enhances the effectiveness of macro-financial surveillance of Hong Kong.

(3) References to the research

- (1) **Luk, P.**, Cheng, M., Ng, P., and Wong, K. (2018). Economic policy uncertainty spillovers in small open economies: the case of Hong Kong. *Pacific Economic Review*, 1-26. <https://doi.org/10.1111/1468-0106.12283>
- (2) Huang, Y., and **Luk, P.** (2018). *Measuring economic policy uncertainty in China*. (Accepted by *China Economic Review* in Oct 2019) Available at https://economicpolicyuncertaintyinchina.weebly.com/uploads/1/2/2/7/122762465/measuring_economic_policy_uncertainty_in_china.pdf
- (3) **Luk, P.** (2015). Chained financial contracts and global banks. *Economic Letters*, 129, 87-90. Available at <https://doi.org/10.1016/j.econlet.2015.02.004>
- (4) **Luk, P.** (2019). *Global bank risk and monetary policy in an emerging economy*. Available at <https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbXwYXVsc2tsdWt8Z3g6MTc1Mzc0ZjBiNmU2YTMwYw>
- (5) **Luk, P.**, and Zheng, T. X. (2019). *Dynamics of secured and unsecured debt over the business cycle*. Available at https://www.imfs-frankfurt.de/fileadmin/user_upload/Events_2018/MMCI_Conference/Papers/01-Paul_Luk-Dynamics_of_Secured_and_Unsecured_Debt_Over_the_Business_Cycle.pdf
- (6) Wong, K., Ng, P., Cheng, M. and **Luk, P.** (2017). Measuring economic uncertainty and its effect on the Hong Kong economy. *Hong Kong Monetary Authority Research Memorandum 11/2017*.

(4) Details of the impact

Impact on public policy:

The EPU index improved macroeconomic forecasts and surveillance of local and regional policymakers. Luk was invited by the Hong Kong Monetary Authority to join their in-house research team in preparing the *HKMA Research Memorandum 11/2017* (6). Furthermore, the HKMA used Luk's index extensively in their analysis to conclude in late 2018 that in response to US-China trade tensions, "*Hong Kong's financial conditions and real sector could be subject to significant increase in downside risk*", and inform their recommendation to exercise "*extra vigilance*" on the development of this issue. [1]

Luk's research also inspired the Office of the Government Economist to develop a similar index called the External Economic Uncertainty Index (EEUI). Luk had many discussions with the Office during the process of index construction and facilitated them to use "*a very similar text mining method*", as acknowledged by Senior Economist of the Office of the Government

Economist [2]. He also points out that this index outperforms indicators currently in use by the Office in terms of its timeliness and applications in high frequency monitoring, and that “*the index is used as a ‘litmus indicator’ for our economic forecasting*”.

The impact has extended beyond Hong Kong. The Monetary Authority of Macau (AMCM) invited Luk to present a similar index for Macau in August 2018. The AMCM published this study in Macao Monetary Research Bulletin and quickly adopted it in its macro-financial surveillance exercise. Luk updates and shares the index with the AMCM on a monthly basis. Chairman of board of directors testifies that the index “*has proven to be useful for... the regular assessment of economic stability*” and that Luk’s works “*have had significant impacts on our economic analyses and forecasts, which are important inputs in formulating economic policies.*”

[3]

Impact on the financial sector:

The EPU indices benefit a wide range for local and international business and financial corporations, including investment banks, economic consulting firms and asset management companies. Practitioners acknowledge that the EPU indices identify, quantify and visualize risks in a timely manner, thus improving their forecasting, investment decisions and communication of risks to their clients. Some examples are listed as follows:

1. Citi Research: The international investment bank and investment research firm has used the China EPU index in its macroeconomic analysis since 2019. The Senior China Economist comments that the nowcasting nature of the index allows him to “*quickly gauge market reactions in response to news*” and “*give timely advices to our international clients.*” [4] Luk’s trade policy index was cited in the *China Economics View* (14 April, 2019) to communicate the firm’s position of China trade uncertainty to their clients. [5] It is also testified that “*the early adoption of Dr. Luk’s uncertainty indices helps us improve our China economic forecasts and outperform the market.*”
2. Asset Management Group: The leading local wealth management company with assets under management of more than HK\$5 billion “*tracks the EPU indices every month*”, and often refers to them in their internal discussion of investment strategy. [6] According to the Chief Investment Officer, “*this simple and useful tool*” helps the group “*assess the market situation and make investment decisions.*” He also points out that “*more and more people in the sector are interested in using the indexes for portfolio management purpose.*”
3. Daiwa Capital Markets Hong Kong: The global investment bank adopts the EPU indices as a sentiment indicator of stress or euphoria due to the indices’ independent and nowcasting properties. The Chief Equity Strategist of Asia Pacific Research, commented that “*the EPUI are relevant to us in our investment process*” and “*helpful in making some of our judgements on direction of economic variables and policy making.*” [7] For example, the EPU index for Hong Kong was cited in their investment report titled *Greater China Strategy* to evaluate market sentiment in Hong Kong.

Impact on public awareness of economic uncertainty:

The EPU index for Hong Kong is hosted by the influential policy uncertainty website [8] along

with EPU indices for more than 20 other regions. Numerous international organizations including the World Bank and the International Monetary Fund frequently apply the data in their surveillance and consultancy work. Furthermore, Luk's indices are freely available in a website [9] which has attracted over 3500 visits. Luk's EPU indices received numerous mentions in TV programmes, newspaper analyses and social media. [see 10 for an example] Given his expertise in China and Hong Kong macroeconomic uncertainty, Luk has been cited by international media including Bloomberg and Reuters.

(5) Sources to corroborate the impact

- [1] HKMA – Half-Yearly Monetary & Financial Stability Report (Sep 2018)
- [2] Testimonial by Mr. David Chan, Senior Economist, Office of the Government Economist, HKSARG
- [3] Testimonial by Dr. Chan Sau San, Benjamin, Chairman of Board of Directors, monetary Authority of Macao
- [4] Testimonial by Dr. Xiangrong Yu, Senior China Economist, Citi Research
- [5] China Economics View
- [6] Testimonial by Mr. Wyman Leung, Chief Investment Officer, Asset Management Group Ltd.
- [7] Testimonial by Dr. Paul Kitney, Chief Equity Strategist, Asia-Pacific Research, Daiwa Capital Markets Hong Kong Limited.
- [8] Economic Policy Uncertainty Index website
<http://www.policyuncertainty.com>
- [9] Economic Policy Uncertainty in China website
<https://econ.hkbu.edu.hk/eng/main/Index>
- [10] [10] RTHK – TV
Programme <https://podcasts.rthk.hk/podcast/item.php?pid=1365&eid=112657&year=2018&lang=zh-CN>