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| RGC Ref. No.:<br><u>UGC/FDS11/B02/19</u><br>(please insert ref. above) |
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**RESEARCH GRANTS COUNCIL  
COMPETITIVE RESEARCH FUNDING SCHEMES FOR  
THE LOCAL SELF-FINANCING DEGREE SECTOR**

**FACULTY DEVELOPMENT SCHEME (FDS)**

**Completion Report**

*(for completed projects only)*

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| <p><b><u>Submission Deadlines:</u></b></p> <ol style="list-style-type: none"> <li>1. Auditor's report with unspent balance, if any: within <b>six</b> months of the approved project completion date.</li> <li>2. Completion report: within <b>12</b> months of the approved project completion date.</li> </ol> |
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**Part A: The Project and Investigator(s)**

**1. Project Title**

Revisiting the DeAngelo (1981) Theory on Auditor Size and Audit Quality at the Audit Firm,  
Audit Office and Engagement Partner Levels

**2. Investigator(s) and Academic Department(s) / Unit(s) Involved**

| Research Team          | Name / Post                              | Unit / Department / Institution  |
|------------------------|--|--|
| Principal Investigator | Prof. CHAN Koon-hung /<br>Professor      | Rita Tong Liu School of<br>Business and Hospitality<br>Management / Caritas Institute<br>of Higher Education |
| Co-Investigator(s)     | Prof. MO, Phyllis Lai-lan /<br>Professor | Department of Accountancy /<br>City University of Hong Kong  |
| Others                 |  |  |

**3. Project Duration**

|                            | Original   | Revised    | Date of RGC /<br>Institution Approval<br><i>(must be quoted)</i> |
|----------------------------|------------|------------|--|
| Project Start Date         | 01/01/2020 | N/A        | N/A  |
| Project Completion Date    | 31/12/2021 | 31/12/2022 | 09/03/2022   |
| Duration <i>(in month)</i> | 24 months  | 36 months  | 09/03/2022   |

|  |            |            |            |
|--|------------|------------|------------|
| Deadline for Submission of Completion Report | 31/12/2022 | 31/12/2023 | 09/03/2022 |
|--|------------|------------|------------|

4.4 Please attach photo(s) of acknowledgement of RGC-funded facilities / equipment.

## **Part B: The Final Report**

### **5. Project Objectives**

#### 5.1 Objectives as per original application

1. Collect relevant data and conduct statistical analysis to test whether firm-level client economic importance can override the audit firm size effect in affecting audit quality.
2. Collect relevant data and conduct statistical analysis to test whether office-level client economic importance can override the audit firm size effect in affecting audit quality.
3. Collect relevant data and conduct statistical analysis to test whether partner-level client economic importance can override the audit firm size effect in affecting audit quality.
4. Conduct statistical analysis to compare the relative importance of firm-level, office-level and partner-level client economic importance in overriding the audit firm size effect to affect audit quality.

#### 5.2 Revised objectives

Date of approval from the RGC: N/A

Reasons for the change:

- 1.
- 2.
3. ..

### 5.3 Realisation of the objectives

(Maximum 1 page; please state how and to what extent the project objectives have been achieved; give reasons for under-achievements and outline attempts to overcome problems, if any)

Our overall research objective is to test whether client economic importance can override the audit firm size effect in affecting audit quality. We use a sample of Chinese listed companies from 2010 to 2019 to examine this research question. We start from 2010 because a wave of mergers and acquisitions among domestic audit firms changed the audit market structure in China significantly between 2006 and 2010. We stop at 2019 to avoid the confounding effect of Covid-19 and related lockdown in China which significantly affect business activities.

We use the propensity of issuing modified audit opinion as the key proxy for audit quality because audit opinions are under auditors' influence and directly measure audit quality (DeFond and Zhang 2014). Modified audit opinions include unqualified opinions with emphasis of matters, qualified opinions, disclaimers and adverse opinions.

Large audit firm are expected to provide higher audit quality because of their exposure to greater litigation risk and reputation risks (DeAngelo 1981, Lennox 1999, Che et al. 2020). We test the difference in audit quality for large audit firms in auditing their less important clients and smaller audit firms in auditing their more important clients. We define client importance at the audit firm level, audit office level and audit partner level to address Research Objectives #1, 2 and 3, respectively. We also compare the relative importance of client importance at different levels in overriding the audit firm size effect to affect audit quality (Research Objective #4). We obtain satisfactory results.

#### Reference:

- Che, L., O. Hope, and J. Langli. 2020. How Big-4 firms improve audit quality. *Management Science* 66(10):4552-4572.
- DeAngelo, E. 1981. Auditor size and audit quality. *Journal of Accounting and Economics* 3(3):183-199.
- DeFond, M., and J. Zhang. 2014. A review of archival auditing research. *Journal of Accounting and Economics* 58 (2-3): 275-326.
- Lennox, C. S. 1999. Audit quality and auditor size: An evaluation of reputation and deep pockets hypotheses. *Journal of Business Finance & Accounting* 26 (7- 8): 779-805.

### 5.4 Summary of objectives addressed to date

| <b>Objectives</b><br>(as per 5.1/5.2 above)   | <b>Addressed</b><br>(please tick) | <b>Percentage Achieved</b><br>(please estimate) |
|---|-----------------------------------|---|
| 1. Test firm-level client importance  | ✓                                 | 100%  |
| 2. Test office-level client importance  | ✓                                 | 100%  |
| 3. Test partner-level client importance   | ✓                                 | 100%  |
| 4. Test the relative importance of client importance at firm-level, office-level and partner-level. | ✓                                 | 100%  |

## 6. Research Outcome

### 6.1 Major findings and research outcome

(Maximum 1 page; please make reference to Part C where necessary)

We compare the difference in audit quality for large audit firms (ranked Top 8 in total audited assets) in auditing their less important clients and for smaller audit firms (non-Top 8) in auditing their more important clients. We measure firm-level client importance as a client's total assets relative to the sum of total assets of all clients audited by the audit firm in a given sample year (Chen et al. 2010). A client is defined as a firm-level important (less important) client if the firm-level importance is in the top (bottom) quarter for each audit firm type (small vs large) in each sample year.

As Chen et al. (2010) find that office-level client importance has no significant effect on audit quality, we focus our tests at the firm and partner levels. We find that Top 8 audit firms provide lower audit quality for their less important clients than non-Top 8 audit firms for their audit firm-level and partner-level important clients. This result shows that the client importance at both the audit firm and audit partner levels can indeed override the audit firm size effect in affecting audit quality. We perform a host of robustness tests including the use of Top 10 instead of Top 8, varying the threshold for client importance, the use of audit fees instead of total assets in measuring client importance and the use of propensity score matched (PSM) samples to address the potential self-selection issues. Our results are robust to all these variations.

In addition, we investigate how industry specialists and auditor busyness may affect our results. We find that industry specialization reduces the quality difference between less important clients of Top 8 audit firms and important clients of non-Top 8 audit firms, whereas partner busyness increases this quality difference.

The effect of office level client importance on audit quality is complicated in China because the two signing partners may come from different audit offices. Further, given that Chen et al. (2010) finds office-level client importance having no effect on audit quality in China, such client importance is not expected to be able to override the firm size effect on audit quality. To verify this expectation, as an additional analysis, we replicate our main analysis for office-level client importance. Surprisingly, we find that office-level client importance can also override the audit firm size effect. The significant difference in sample period between our study and that of Chen et al. (2010) may explain the results. There appears to have a significant improvement overtime in the audit quality of the audit offices of smaller audit firms in China.

Finally, Chi-square tests of the differences in the coefficients of the Top 8 variable (=1 for Top 8 audit firms, and zero otherwise) among the three levels of client importance indicate that overall, there is no significant difference in the relative importance of firm-, office- and partner-level client economic importance in overriding the audit firm size effect to affect audit quality. That is, any one level of client importance is equally well in offsetting the audit firm size effect to affect audit quality.

#### References:

Chen, S., S.Y.J., Sun, D. Wu. 2010. Client importance, institutional improvements, and audit quality in China: An office and individual auditor level analysis. *The Accounting Review* 85(1): 127–158.

## 6.2 Potential for further development of the research and the proposed course of action (Maximum half a page)

Audit firm size has been widely used as a surrogate for audit quality in many studies (Choi and Wong 2007; Guedhami et al. 2009; DeFond et al. 2016; Che et al. 2020). Nevertheless, in practice, we have seen that, over the years, large audit firms have not taken good care of many of their clients, resulting in numerous audit failures, sanctions and legal actions. Given the overall result of this research that client importance can offset and override the firm size effect in affecting audit quality, researchers should, in the future, be more skeptical and careful in simplistically assuming that large audit firms will provide higher audit quality. Practitioners should also re-examine their choice of auditor because “small can be beautiful”. Future research can also challenge some prior studies on their simplistic use of audit firm size as a surrogate for audit quality.

### Reference:

- Che, L., O. Hope, and J. Langli. 2020. How Big-4 firms improve audit quality. *Management Science* 66(10):4552-4572.
- Choi, J. H., and T. J. Wong. 2007. Auditors' governance functions and legal environments: An international investigation. *Contemporary Accounting Research* 24(1): 13-46.
- DeFond, M., D.H. Erkens and J. Zhang. 2016. Do client characteristics really drive the Big N audit quality effect? New evidence from propensity score matching. *Management Science* 63 (11): 3628-3649
- Guedhami, O., J. A. Pittman and W. Saffar. 2009. Auditor choice in privatized firms: Empirical evidence on the role of state and foreign owners. *Journal of Accounting and Economics* 48, 151-171.

## 7. Layman's Summary

(Describe in layman's language the nature, significance and value of the research project, in no more than 200 words)

This study challenges the established theory and paradigm on audit firm size and provides evidence to show that the effect of client importance can indeed override the effect of audit firm size when comparing audit quality across firms. We alert researchers and practitioners on the potential pitfall of simplistic use of audit firm size as a proxy for audit quality.

While this study is based on Chinese data, we believe that the findings have worldwide implications. In western countries where the audit markets are dominated by Big N audit firms, policymakers have raised concern that large accounting firm are “too big to fail” and have proposed strategies to better develop medium- and small-sized audit firms. While the Public Company Accounting Oversight Board (PCAOB) detect audit deficiencies in annual inspections of large audit firms, many triennially-inspected smaller audit firms receive clean inspection reports, suggesting that many small audit firms have provided high audit quality. Our study provides new insight into this issue by examining the factors that lead to higher audit quality of small audit firms than large audit firms.

**Part C: Research Output****8. Peer-Reviewed Journal Publication(s) Arising Directly From This Research Project**

*(Please attach a copy of the publication and/or the letter of acceptance if not yet submitted in the previous progress report(s). All listed publications must acknowledge RGC's funding support by quoting the specific grant reference.)*

| The Latest Status of Publications |  |              |                                 | Author(s)<br>(denote the corresponding author with an asterisk*) | Title and Journal / Book<br>(with the volume, pages and other necessary publishing details specified) | Submitted to RGC<br>(indicate the year ending of the relevant progress report) | Attached to this Report<br>(Yes or No) | Acknowledged the Support of RGC<br>(Yes or No) | Accessible from the Institutional Repository<br>(Yes or No) |
|-----------------------------------|--|--------------|---------------------------------|--|---|--|--|--|---|
| Year of Publication               | Year of Acceptance<br>(For paper accepted but not yet published) | Under Review | Under Preparation<br>(optional) |  |   |  |  |  |   |
|                                   |  |              | ✓                               | Koon Hung Chan*,<br>Phyllis Mo                                   |   |  | Yes, full working paper                | Yes  | No  |
|                                   |  |              |                                 |  |   |  |  |  |   |
|                                   |  |              |                                 |  |   |  |  |  |   |
|                                   |  |              |                                 |  |   |  |  |  |   |

**9. Recognized International Conference(s) In Which Paper(s) Related To This Research Project Was / Were Delivered**

*(Please attach a copy of each conference abstract)*

| Month / Year / Place        | Title   | Conference Name  | Submitted to RGC<br>(indicate the year ending of the relevant progress report) | Attached to this Report<br>(Yes or No) | Acknowledged the Support of RGC<br>(Yes or No) | Accessible from the Institutional Repository<br>(Yes or No) |
|-----------------------------|---|--|--|--|--|---|
| December 2020/<br>Hong Kong | Do Big N Audit Firms really provide higher Audit Quality? | 2020 Academy of International Business, Southeast Asia Regional Conference | 2020   | Yes, Abstract                          | Yes  | Yes   |
|                             |   |  |  |  |  |   |
|                             |   |  |  |  |  |   |

**10. Whether Research Experience And New Knowledge Has Been Transferred / Has Contributed To Teaching And Learning**

*(Please elaborate)*

This research experience has been transferred to teaching related to student business research projects and the teaching of Auditing courses at both the undergraduate and graduate levels.

**11. Student(s) Trained**

*(Please attach a copy of the title page of the thesis)*

| Name | Degree Registered for | Date of Registration | Date of Thesis Submission / Graduation |
|------|-----------------------|----------------------|--|
|      | N/A                   |                      |  |
|      |                       |                      |  |
|      |                       |                      |  |

**12. Other Impact**

*(e.g. award of patents or prizes, collaboration with other research institutions, technology transfer, teaching enhancement, etc.)*

Collaboration with other research institution:

This research is a collaboration with City University of Hong Kong.

Teaching Enhancement: Audit firm size and audit quality is an important topic for Auditing courses at both the undergraduate and graduate levels. This research certainly enriches the discussions on this topic. In addition, all Caritas business students must conduct a business research project before graduation. This research inspires students on conducting Auditing research in general and audit quality research in particular.

**13. Statistics on Research Outputs**

| No. of outputs arising directly from this research project | Peer-reviewed Journal Publications | Conference Papers | Scholarly Books, Monographs and Chapters | Patents Awarded | Other Research Outputs (please specify) |     |
|--|------------------------------------|-------------------|--|-----------------|---|-----|
|  |                                    |                   |  |                 | Type                                    | No. |
|  |                                    | 1                 |  |                 | Working Paper                           | 1   |

**14. Public Access Of Completion Report**

*(Please specify the information, if any, that cannot be provided for public access and give the reasons.)*

| <b>Information that Cannot Be Provided for Public Access</b> | <b>Reasons</b>  |
|--|---|
| The Working Paper attached to this report.                   | Prefer not to disclose the details of the methodologies used before publication of the paper. |