

Appendix

มหาวิทยาลัยราชภัฏธนบุรี

## Appendix A

Letter Expert Invitation

มหาวิทยาลัยราชภัฏธนบุรี

# Letter Expert invitation

No. 0642.09 (4)/142



Graduate Study Program  
Dhonburi Rajabhat University  
172 Itsaraphap Rd., Thonburi  
Bangkok 10600

September 4, 2023

Subject Invitation Letter for Expert to Validate Research Instruments

Dear Mr. Pharunyu Thanaruedee

Mrs. Liu Xin, a graduate student in MBA (Master in Business Administration Program) of Dhonburi Rajabhat University, is currently working on her independent study entitled "Service Quality of Cold Chain Logistics Based on Customer Relationship Management: A Case Study of Shun Feng Express Co., Ltd.", having Dr.Sittichai Farlangthong as her principal advisor.

In lieu with this, the Graduate Study Program would like to request your expertise to validate the research tools used. Details will be informed by the researcher onwards.

We hopefully could have your assistance on this matter as to further academic benefits and would hereby like to express our thanks to you.

Best regards,

*Sirikun*

(Lect. Sirikun Buakeaw)  
Director of Graduate Study Program

Graduate Study Program  
Tel. 0-2890-1801 ext. 5  
E-mail [graduate@dru.ac.th](mailto:graduate@dru.ac.th)  
Website <https://grad.dru.ac.th>

I hereby approve the research instrument validity.

*P. Thanarudee*

(Mr. Pharunyu Thanaruedee)

Date 7 Sept. 2023.....

\*Remark: This letter would be failed for reference use with the absence of expert's signature.

No. 0642.09 (4)/144



Graduate Study Program  
Dhonburi Rajabhat University  
172 Itsaraphap Rd., Thonburi  
Bangkok 10600

September 4, 2023

Subject Invitation Letter for Expert to Validate Research Instruments

Dear Mr. Pairat Tongvijit

Mrs. Liu Xin, a graduate student in MBA (Master in Business Administration Program) of Dhonburi Rajabhat University, is currently working on her independent study entitled "Service Quality of Cold Chain Logistics Based on Customer Relationship Management: A Case Study of Shun Feng Express Co., Ltd.", having Dr.Sittichai Farlangthong as her principal advisor.

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Tel. 0-2890-1801 ext. 5  
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Website <https://grad.dru.ac.th>

I hereby approve the research instrument validity.

*P. Tongvijit*  
(Mr. Pairat Tongvijit)

Date 5 Sept. 2023

\*Remark: This letter would be failed for reference use with the absence of expert's signature.

No. 0642.09 (4)/143



Graduate Study Program  
Dhonburi Rajabhat University  
172 Itsaraphap Rd., Thonburi  
Bangkok 10600

September 4, 2023

Subject Invitation Letter for Expert to Validate Research Instruments

Dear Lect. Gronavit Taykatuk

Mrs. Liu Xin, a graduate student in MBA (Master in Business Administration Program) of Dhonburi Rajabhat University, is currently working on her independent study entitled "Service Quality of Cold Chain Logistics Based on Customer Relationship Management: A Case Study of Shun Feng Express Co., Ltd.", having Dr.Sittichai Farlangthong as her principal advisor.

In lieu with this, the Graduate Study Program would like to request your expertise to validate the research tools used. Details will be informed by the researcher onwards.

We hopefully could have your assistance on this matter as to further academic benefits and would hereby like to express our thanks to you.

Best regards,

*Sirikun*

(Lect. Sirikun Buakeaw)  
Director of Graduate Study Program

Graduate Study Program  
Tel. 0-2890-1801 ext. 5  
E-mail [graduate@dru.ac.th](mailto:graduate@dru.ac.th)  
Website <https://grad.dru.ac.th>

I hereby approve the research instrument validity.

A handwritten signature in blue ink, appearing to be 'G.T.' with a flourish.

(Lect. Gronavit Taykatuk)

Date 13 Sep 2023

\*Remark: This letter would be failed for reference use with the absence of expert's signature.



คณะกรรมการจริยธรรมการวิจัยในมนุษย์ มหาวิทยาลัยราชภัฏธนบุรี  
172 ถนนอิสรภาพ เขตธนบุรี กรุงเทพมหานคร 10600 เบอร์โทรศัพท์ 02 890 0001  
Dhonburi Rajabhat University Institutional Review Board  
172 Itsaraparb Rd., Thonburi, Bangkok 10600 Tel No. 662 890 0001

เอกสารรับรองการพิจารณาโครงการจริยธรรมการวิจัยในมนุษย์แบบยกเว้น  
Certificate of Exemption from Human Research Ethics Review

หมายเลขเอกสารรับรอง (COE NO.) 053/2566

หมายเลขคณะกรรมการจริยธรรมการวิจัยในมนุษย์ (RB NO.) DRUIRB-GOV-66-00015

ชื่อโครงการ (Research title) :

(ภาษาไทย) -

(English) Service Quality of Cold Chain Logistics based on Customer Relationship Management-A Case study of Shun Feng Express Co., Ltd

เลขที่โครงการวิจัย (Research number) : 059/2566

ผู้วิจัยหลัก (Principal investigator) : (ภาษาไทย) -

(English) - Mrs. Liu Xu

หน่วยงานที่สังกัด (Institutional affiliation) : Master of Business Administration Program, Faculty of Management  
Science, Dhonburi Rajabhat University

ผู้วิจัยร่วม (Co-investigators) : (ภาษาไทย) -

(English) -

หน่วยงานที่สังกัด (Institutional affiliation) -

โครงการวิจัยนี้ ได้รับการรับรองจากคณะกรรมการจริยธรรมการวิจัยในมนุษย์ มหาวิทยาลัยราชภัฏธนบุรี

This research project is approved by Dhonburi Rajabhat University Institutional Review Board.

วันที่รับรอง (Certified date) : 14 กันยายน 2566 (September 14<sup>th</sup>, 2023)

(ดร. ผ่องศรี เวสราช์/ Dr. Phongsri Waysarach)

ประธานคณะกรรมการจริยธรรมการวิจัยในมนุษย์ มหาวิทยาลัยราชภัฏธนบุรี  
Chairperson of Dhonburi Rajabhat University Institutional Review Board

หมายเหตุ :

1. ไม่ต้องส่งรายงานความก้าวหน้า
2. ส่งรายงานการวิจัยฉบับสมบูรณ์ พร้อมแบบฟอร์มรายงานผลสรุปการวิจัย (DRU - IRB Form 14-01/2.0) เมื่องานวิจัยแล้วเสร็จ

Remarks:

1. No requirement for progress report.
2. When complete the research, please submit a full research report and the research report form (DRU - IRB Form14-01/2.0).

## Appendix B

Questionnaire

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# Questionnaire Survey on Service Quality of SF Cold Chain Logistics

Dear Sir Or Madam,

This is a questionnaire about the service quality of SF cold chain logistics. If you have used SF cold chain logistics before, please fill in the following questionnaire according to your actual experience. If you have not used SF cold chain logistics before, thank you for your reading. Your information is for academic research only and will not be used for other commercial purposes. Thanks!

Thank you again for your great support!

**Instruction:** Please mark ✓ into the square corresponding to your opinion

## Part 1 General information of respondents

### 1. Age

- 18-25 years old                       26-35 years old  
 36-45 years old                       46-55 years old  
 55 years and older

### 2. Gender

- Male     female sex

### 3. Education

- High school and below                       Junior college  
 Undergraduate                                       Master or above

### 4. Place of residence

- Town     Countryside  
 Suburb     mountain area

### 5. Time of usage of Sf Express cold chain logistics

- Less than 1 year                                       1-3 years  
 4-6 years     More than 6 years



**Part 2 Below are some questions related to Service Quality 5 Item**

- 5 = Opinion is at the highest level    4 = Opinion is at a high level  
 3 = moderate opinion                      2 = opinions are at a low level  
 1 = The opinion is very low

| Quality of service: SERVQUAL |                 |   | Opinion Level |   |   |   |   |
|------------------------------|-----------------|---|---------------|---|---|---|---|
|                              |                 |   | 1             | 2 | 3 | 4 | 5 |
| 1                            | Tangible assets | Advanced logistics information software   |               |   |   |   |   |
|                              |                 | Image of service personnel  |               |   |   |   |   |
|                              |                 | The staff have clean clothes  |               |   |   |   |   |
|                              |                 | Cold chain facilities and equipment can meet the needs of the service provided          |               |   |   |   |   |
| 2                            | Reliability     | Cargo damage  |               |   |   |   |   |
|                              |                 | Packaging processing compliance   |               |   |   |   |   |
|                              |                 | Inventory integrity   |               |   |   |   |   |
|                              |                 | Delivery timeliness   |               |   |   |   |   |
|                              |                 | The timely completion of the promised things to the customer                            |               |   |   |   |   |
| 3                            | Response        | Order response capability   |               |   |   |   |   |
|                              |                 | Ability to resolve customer complaints and complaints                                   |               |   |   |   |   |
|                              |                 | Can accurately inform the customer delivery time  |               |   |   |   |   |
|                              |                 | Customer service call through timely  |               |   |   |   |   |
| 4                            | Guarantee       | Professional quality and professional ability of service personnel                      |               |   |   |   |   |
|                              |                 | Provide suitable and accurate cold chain transportation, storage and other environments |               |   |   |   |   |
|                              |                 | The staff were very polite  |               |   |   |   |   |
| 5                            | Empathy         | The ability to provide personalized service   |               |   |   |   |   |
|                              |                 | Give priority to customer interests   |               |   |   |   |   |
|                              |                 | Understanding of customer needs   |               |   |   |   |   |
|                              |                 | Care for customers and provide customers with accurate information                      |               |   |   |   |   |

**Part 3 Below are some questions related to Customer Relationship Management**

**4 Item**

- 5 = Opinion is at the highest level    4 = Opinion is at a high level  
 3 = Moderate opinion                      2 = Opinions are at a low level  
 1 = The opinion is very low

| Assessment Topics |                             |   | Opinion Level |   |   |   |   |
|-------------------|-----------------------------|---|---------------|---|---|---|---|
|                   |                             |   | 1             | 2 | 3 | 4 | 5 |
| 1                 | Customer Prospects          | Customer relationship Management program                    |               |   |   |   |   |
|                   |                             | SF Cold chain logistics impressions                         |               |   |   |   |   |
|                   |                             | New customer growth rate                                    |               |   |   |   |   |
| 2                 | Relationship with Customers | Loyal to SF Cold chain Logistics                            |               |   |   |   |   |
|                   |                             | Ability to sign contracts                                   |               |   |   |   |   |
| 3                 | Interactive Management      | SF Cold chain logistics contact frequency with customers    |               |   |   |   |   |
|                   |                             | SF Cold chain logistics price campaign recognition          |               |   |   |   |   |
|                   |                             | The diversity of forms of interaction between the two sides |               |   |   |   |   |
| 4                 | Customer Expectation        | Availability of a product or service                        |               |   |   |   |   |
|                   |                             | Overall service satisfaction                                |               |   |   |   |   |

**Part 4 Additional Suggestions**

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Thank you to everyone who answered the questionnaire

## Appendix C

IOC Test Results

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## Results IOC Expert Assessment

Service Quality of Cold Chain Logistics based on Customer Relationship

Management: A Case study of Shun Feng Express Co., Ltd

| Question point  | comment  |          |          | IOC  | Interpet |
|---|----------|----------|----------|------|----------|
|   | Person 1 | Person 2 | Person 3 |      |          |
| <b>Part 1 General information of respondents</b>  |          |          |          |      |          |
| <b>1. Age</b><br><input type="checkbox"/> 18-25 years old<br><input type="checkbox"/> 26-35 years old<br><input type="checkbox"/> 36-45 years old<br><input type="checkbox"/> 46-55 years old<br><input type="checkbox"/> 55 years and older. | 1        | 1        | 1        | 1.00 | OK       |
| <b>2. Gender</b><br><input type="checkbox"/> Male<br><input type="checkbox"/> Female  | 1        | 1        | 1        | 1.00 | OK       |
| <b>3. Education</b><br><input type="checkbox"/> High school and below<br><input type="checkbox"/> Junior college<br><input type="checkbox"/> Undergraduate<br><input type="checkbox"/> Master or above  | 1        | 1        | 1        | 1.00 | OK       |
| <b>4. Place of residence</b><br><input type="checkbox"/> Town<br><input type="checkbox"/> Countryside<br><input type="checkbox"/> Suburb<br><input type="checkbox"/> mountain area  | 1        | 1        | 1        | 1.00 | OK       |
| <b>5. Time of usage of Sf Express cold chain logistics</b><br><input type="checkbox"/> Less than 1 year<br><input type="checkbox"/> 1-3 years<br><input type="checkbox"/> 4-6 years<br><input type="checkbox"/> More than 6 years             | 1        | 1        | 1        | 1.00 | OK       |

| Quality of service: SERVQUAL   | comment  |          |          | IOC  | Interpet |
|--|----------|----------|----------|------|----------|
|  | Person 1 | Person 2 | Person 3 |      |          |
| <b>Part 2 Below are some questions related to Service Quality</b>                          |          |          |          |      |          |
| <b>Tangible Assets</b>   |          |          |          |      |          |
| 1. Advanced logistics information software   | 1        | 1        | 1        | 1.00 | OK       |
| 2. Image of service personnel  | 1        | 1        | 1        | 1.00 | OK       |
| 3. The staff have clean clothes  | 1        | 1        | 1        | 1.00 | OK       |
| 4. Cold chain facilities and equipment can meet the needs of the service provided          | 1        | 1        | 1        | 1.00 | OK       |
| <b>Reliability</b>   |          |          |          |      |          |
| 1. Cargo damage  | 1        | 0        | 1        | 0.67 | OK       |
| 2. Packaging processing compliance   | 1        | 1        | 1        | 1.00 | OK       |
| 3. Inventory integrity   | 1        | 1        | 1        | 1.00 | OK       |
| 4. Delivery timeliness   | 1        | 1        | 1        | 1.00 | OK       |
| 5. The timely completion of the promised things to the customer                            | 1        | 0        | 1        | 0.67 | OK       |
| <b>Responsive</b>  |          |          |          |      |          |
| 1. Order response capability   | 1        | 1        | 1        | 1.00 | OK       |
| 2. Ability to resolve customer complaints and complaints                                   | 1        | 1        | 1        | 1.00 | OK       |
| 3. Can accurately inform the customer delivery time  | 1        | 0        | 1        | 0.67 | OK       |
| 4. Customer service call through timely  | 1        | 1        | 1        | 1.00 | OK       |
| <b>Guarantee</b>   |          |          |          |      |          |
| 1. Professional quality and professional ability of service personnel                      | 1        | 1        | 1        | 1.00 | OK       |
| 2. Provide suitable and accurate cold chain transportation, storage and other environments | 1        | 1        | 1        | 1.00 | OK       |
| 3. The staff were very polite  | 1        | 0        | 1        | 0.67 | OK       |
| <b>Empathy</b>   |          |          |          |      |          |
| 1. The ability to provide personalized service   | 1        | 1        | 1        | 1.00 | OK       |
| 2. Give priority to customer interests   | 1        | 1        | 1        | 1.00 | OK       |
| 3. Understanding of customer needs   | 1        | 1        | 1        | 1.00 | OK       |
| 4. Care for customers and provide customers with accurate information                      | 1        | 1        | 1        | 1.00 | OK       |

| Quality of service: SERVQUAL   | comment  |          |          | IOC  | Interpet |
|--|----------|----------|----------|------|----------|
|  | Person 1 | Person 2 | Person 3 |      |          |
| <b>Part 3 Below are some questions related to Customer Relationship Management</b> |          |          |          |      |          |
| <b>Customer Prospects</b>  |          |          |          |      |          |
| 1. Customer relationship Management program  | 1        | 1        | 1        | 1.00 | OK       |
| 2. SF Cold chain logistics impressions   | 1        | 0        | 1        | 0.67 | OK       |
| 3. New customer growth rate  | 1        | 1        | 1        | 1.00 | OK       |
| <b>Relationship with Customers</b>   |          |          |          |      |          |
| 1. Loyal to SF Cold chain Logistics  | 1        | 1        | 1        | 1.00 | OK       |
| 2. Ability to sign contracts   | 1        | 1        | 1        | 1.00 | OK       |
| <b>Interactive Management</b>  |          |          |          |      |          |
| 1. SF Cold chain logistics contact frequency with customers                        | 1        | 1        | 1        | 1.00 | OK       |
| 2. SF Cold chain logistics price campaign recognition                              | 1        | 0        | 1        | 0.67 | OK       |
| 3. The diversity of forms of interaction between the two sides                     | 1        | 1        | 1        | 1.00 | OK       |
| <b>Customer Expectation</b>  |          |          |          |      |          |
| 1. Availability of a product or service  | 1        | 1        | 1        | 1.00 | OK       |
| 2. Overall service satisfaction  | 1        | 1        | 1        | 1.00 | OK       |

## Results IOC

Part 1 General information = 5.00

Part 2 Service Quality

- Tangible assets = 5.00
- Reliability = 4.34
- Responsive = 3.67
- Guarantee = 2.67
- Empathy = 4.00

Part 3 CRM

- Customer Prospects = 2.67
- Relationship with customers = 2.00
- Interactive Management = 2.67
- Customer expectation = 2.00

Total =  $42.02 \div 43 = 0.97$

concluded that : Yes, because the content validity is higher than the threshold value.  
which can be used for further research

## Appendix D

Reliability

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## Result Service Quality

### Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .883             | 30         |

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Item-Total Statistics

|        | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|--------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| tan1   | 111.9000                   | 69.197                         | .282                             | .882                             |
| tan2   | 111.8333                   | 69.730                         | .253                             | .883                             |
| tan3   | 111.9333                   | 70.202                         | .193                             | .884                             |
| tan4   | 111.8333                   | 69.937                         | .264                             | .882                             |
| reli1  | 111.8000                   | 69.614                         | .295                             | .882                             |
| reli2  | 111.9333                   | 66.478                         | .466                             | .878                             |
| reli3  | 111.7667                   | 67.978                         | .421                             | .879                             |
| reli4  | 111.8667                   | 67.154                         | .516                             | .877                             |
| reli5  | 112.1667                   | 71.385                         | .064                             | .889                             |
| respo1 | 112.4333                   | 72.737                         | -.039                            | .890                             |
| respo2 | 112.2667                   | 73.099                         | -.072                            | .888                             |
| respo3 | 112.4333                   | 71.771                         | .089                             | .885                             |
| respo4 | 112.3333                   | 68.782                         | .292                             | .882                             |
| guo1   | 112.3000                   | 68.700                         | .342                             | .881                             |
| guo2   | 112.4667                   | 70.120                         | .338                             | .881                             |
| guo3   | 112.4000                   | 67.007                         | .555                             | .876                             |
| emp1   | 112.4333                   | 66.461                         | .539                             | .876                             |
| emp2   | 112.7333                   | 66.133                         | .767                             | .872                             |
| emp3   | 112.4000                   | 67.007                         | .555                             | .876                             |
| emp4   | 112.4333                   | 66.461                         | .539                             | .876                             |
| custo1 | 112.7333                   | 66.133                         | .767                             | .872                             |
| custo2 | 112.7333                   | 66.340                         | .741                             | .873                             |
| custo3 | 112.9333                   | 68.340                         | .410                             | .879                             |
| rela1  | 112.7333                   | 66.133                         | .767                             | .872                             |
| rela2  | 112.4000                   | 67.007                         | .555                             | .876                             |
| inter1 | 112.4333                   | 66.461                         | .539                             | .876                             |
| inter2 | 112.7333                   | 66.133                         | .767                             | .872                             |

|        |          |        |      |      |
|--------|----------|--------|------|------|
| inter3 | 112.7333 | 66.340 | .741 | .873 |
| cus1   | 112.9333 | 68.340 | .410 | .879 |
| cus2   | 112.7333 | 66.133 | .767 | .872 |

มหาวิทยาลัยราชภัฏธนบุรี

## Biography

**Name** Liu Xin  
**Day Month Year of Birth** 23 February 1984  
**Domicile** No. 753 Jinshui Road, Licang District, Qingdao City,  
Shandong Province, China

### Academic Background

2004-2008 Binhai College, Nankai University  
2021-2023 Master of Business Administration  
Dhonburi Rajabhat University

### Place of Work

Qingdao College of Science and Technology, China

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