

Application Guideline for
Contract Research on “Firm-level survey of Innovations
with Network Effects in Production Networks in Indonesia”
Commissioned by IDE-JETRO

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President, Japan External Trade Organization

APPLICATION GUIDELINE

All of applicants should apply in accordance with this guideline, with recognition about contents of this specification.

1. Proposal Form Submission

Submit the Proposal Form in which all necessary items are filled, following the instruction stipulated above clauses by the deadline shown below by e-mail and mail/courier service. All application documents submitted will not be returned to original applicants.

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Submission DEADLINE: 17:00, October 10, 2017 (JST=GMT+9)

2. Evaluation Schedule

Accepting Proposal: September 15, 2017 ~ October 10, 2017

Evaluation Process: October 11, 2017 ~ October 13, 2017

Notification: by November 10, 2017

Contract: by November 10, 2017

SPECIFICATION

Enclosed Proposal Form shall be submitted following all requirements and conditions specified in the clauses below.

1. Evaluation Criteria

1. Feasibility of technical approach and methodology for the survey to meet the research purposes
2. Adequacy of work plan to complete the survey in the required timeframe
3. Organizational experience with and capability of questionnaire surveys on the related subjects
4. Familiarity with the sector where the survey is conducted
5. Qualifications of staff

2. Title of the Research

“Firm-level survey of Innovations with network effects in production networks in Indonesia”

3. Background and Objectives of the Research

Emerging technological innovations, such as IoT, big data, electronic vehicles, and automated driving, have a great potential of influencing national growth strategies. Developing countries believe that the adoption of radical technological innovations may allow them to leapfrogging the conventional technological ladder and growth path. Since the beginning of the 2000s, such debates have repeated, centering on information and communication technologies (ICTs). When the Internet started its rapid diffusion to general users, the Internet revolution expected to bring fundamental changes to the society and the world. Then, such expectations extended to Internet-based applications like RFID that enable to link everything through the Internet, realize real-time monitoring of things, and make logistic services considerably efficient. These expectations lead to the current policy challenges related to technological frontiers like Industry 4.0. On the other hand, digital divide has been of continuous concerns. Policies to promote new technologies can on the one hand accelerate economic development, but at the same time increase development gaps.

The evolution of new technologies may depend not only on innovations in elemental technologies but also on the existence of leading users. The previous ERIA research project on the capital goods industry highlighted important roles of leading users of capitals goods in incremental innovations in capital goods. Interactions between sales engineers from capital goods suppliers and their customers in developing countries generate new ideas, which affects accurately to R&D departments of capital goods suppliers to develop new products suitable to usage conditions in developing countries. Such leading user companies of capital goods can be in a virtuous cycle of getting benefits from frontier technologies. On the other hand, many companies do not take advantage of new technologies, as debates on digital divide indicate. These firms are outside of the virtuous cycle generated from the relationship between capital goods suppliers and their customers. How to encourage firms to adopt new technologies is a policy challenge.

These issues are not limited to frontier technologies. Many firms, especially SMEs, cannot introduce conventional systems such as automation that are in widespread use among large firms. A special case in Southeast Asia is

Myanmar in the transition process from closed to open economies. Myanmar firms had stopped taking risks of investments in capital goods over the last 20 years or longer periods but are introducing technologies new to Myanmar but widely-used in other countries. The promotion of new technologies is also associated with the structural reforms of state-owned enterprises (SOEs) in several ASEAN member states.

The series of ERIA research project on innovation focuses on technology transfer and knowledge creation through interactions among firms and between firms and other institutions to open up a black box of innovation mechanism inside firms. The research shows the importance for firms to make an effective use of external knowledge sources for their innovative activities. By combining externally and internally available knowledge, innovations can be realized by firms with and without R&D department. The latest research also identifies factors inside firms influential to combining these knowledge and realizing innovation, such as top management's leadership, information sharing through cross functional team and inter-departmental meeting, organizational culture to learn from outside, rewarding systems and career path programs to motivate employees to learn and retain researchers and skilled engineers. These findings indicate that financial constraint is the only hindrance for firms to benefit new technologies.

With this awareness and findings from the previous studies in mind, this study focuses on a specific type of innovative project with the aim of investigating:

- Backgrounds of top management that may affect the propensity to response to and introduce new technologies proactively.
- Organizational culture and routines that may complement the proactive adoption of new technologies,
- Measures taken by firms to secure human resources and develop human resource management, both of which are necessary for the adoption of new technologies,
- Hindering factors for firms to introduce radical innovations (e.g., incompatibility with legacy systems, organizational conventions, concerns over personnel downsizing and replacement of existing manual workers with fresh well-educated professionals) and how firms overcome them,
- External promotional factors including internationalization and positive externality that may strengthen buyer-supplier relationships in production networks.

4. Scope of Work on the Research

This Research conducts a survey of the manufacturing firms locating in the greater Jakarta metropolitan area (including "JABODETABEK" and Karawang) using a self-reported questionnaire on the following four topics:

1. The contents of firm-level basic characteristics
2. The firm-level performances including process and product innovations
3. The adoption of management practices within firm across departments
4. Management practices with regard to inter-firm relationship

The scope of work shall (1) assemble a list of manufacturing firms for survey; (2) check appropriateness and relevance of the questionnaire; (3) send and collect the questionnaire; (4) report progress of the survey regularly; (5) do data cleaning to each response for all responding firms; (6) send the cleaned data as an electric form. The number of collected response is at least 150 firms.

5. Expected Outcome

It is expected that this Research will reveal the firm-level evidences of the adoption of management practices, inter-firm relationships, and firm-performance in Indonesia. The data collected by the Research will contribute to support quantitative arguments made in the papers.

The final expected outcome is producing a dataset that contains raw data of the respondent firms based on the questionnaire and supply it along with a codebook and questionnaire. The expected outcome also includes a report on the collected dataset in Indonesia including the detailed survey results, appropriate figures, and tables.

6. Research Schedule

Term of Research work:

Research work shall be conducted from November 10, 2017 to March 30, 2018.

November 10, 2017 to January 22, 2018

- Assembling a list of manufacturing firms
- Preparation for dispatching the questionnaire.
- Dispatching the questionnaire.
- Collection of the early responses, if any.

January 22, 2018 (JST=GMT+9)

- Submission of a final report of the research (as specified in 7. Reports)

7. Reports

Final report including following items shall be submitted by January 22, 2018 (JST=GMT+9).

- List of whole firms for sampling.
- Description of the survey, sampling process, and compilation of tables and figures collected.
- All Collected Questionnaire Sheets (PDF format).
- Survey Raw Data (Excel format): at least 150 firms.

8. Budget Estimation Guideline

- (1) Total Budget: Total amount of (2) and (3) is JPY 1,984,000.
- (2) Direct Expenses: See clause 9 for details.
- (3) Administrative Overhead: Administrative expenses on the Research activities, in maximum 10 % of total direct expenses would be on budget proposing.

9. General Condition of Expenditure and Account Management on the Research

(1) Expenditure Items

Expenditure items on the Research should be confined to the following items.

1) Direct Expenses

a. Honoraria for researchers

Keep daily work logs on report sheet provided by IDE-JETRO in order to confirm the status of the Research work.

b. Wages and salaries for research assistants

Upon hiring research assistants, keep daily reports specifying the name of the employee and content of service, to confirm the status of work.

2) Administrative Overhead

Expenditure such as telecommunication on the Research shall be borne within the amount of Administrative Overhead.

10. Statement of Accounts for Settlement and Time sheets

Statement of Accounts for Settlement and Time sheets shall be submitted by March 29, 2018(JST=GMT+9).

Enclosed: PROPOSAL FORM