Research Report Summary

令和４年度内外一体の経済成長戦略構築にかかる国際経済調査事業（政府支援策等の戦略的な英語情報発信にかかる調査研究事業）

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Background, purpose of task related to this project

■ **Background of the project**

Creating a business environment where foreign and foreign-affiliated enterprises and human resources feel accommodated is vital to attracting FDI to revitalize Japan's economy. However, many foreign and foreign-affiliated firms in Japan have voiced their concerns about the limited availability of English-language information on government policies, which often results in a lack of information sharing from the Japanese subsidiaries of foreign firms to their headquarters, impeding decision-making or missing the right time to consider such policies.

■ **Objectives**

To promote the effective use of foreign companies and human resources in Japan hereafter, the government must ensure that all administrative announcements and documents related to the budget, legal system and policies are available in English. This project aims to gain a certain level of understanding of the extent to which Japan lacks in disseminating English information compared to other countries and to conduct a strategic review of the situation to promote efforts to remedy the same.

■ **Details on tasks in this project**

Task 1: Identifying Issues for English Information Providers
A desktop survey on the content of English-language information dissemination in each of the selected categories selected, and a comparative analysis with Japan will be conducted.
Interviews and questionnaire surveys will be conducted with government and government-related organizations that have disseminated information in English to identify their how they disseminate information in English and the issues they face in doing so.

Task 2: Identifying the needs of recipients of English-language information
Conducting interviews with foreign-affiliated companies in Japan to identify desired English-language information, as well as to organize standards and other information concerning the necessity and priority of the information.

Task 3: Strategic implementation-based trial initiatives
The Japanese government and others will examine policy information and published documents that should be disseminated in English.
Based on the criteria and strategies, documents to be translated into English will be selected from among the government's published materials, and information will actually be disseminated using multiple translation methods on a trial basis. Furthermore, a comparative study of the time required for dissemination, cost, translation accuracy, effectiveness, etc. will be conducted.

Overview of Task 1

- NRI conducted a comparative analysis to present the challenges related to English-language information dissemination in Japan by identifying the methods, the actual state and effects of dissemination of information in the English language for non-native English-speaking countries.

- Additionally, issues identified in task 1 regarding the dissemination of English-language information in Japan were addressed in task 3.

- Overview of the survey
  1. **English-language information dissemination analysis:** NRI conducted an analysis of the actual state of English-language information dissemination in non native English-speaking countries, and analyzed the content of information, translation methods, dissemination methods, and their effectiveness. (I. Public Information Survey and II. Questionnaire Survey)
  2. **Understanding the actual situation concerning the method of information dissemination in English:** Given below is a summary of the issues that can be expected when actually disseminating information in English in Japan.(I. Public Information Survey and III. Expert Interviews)

Figure: Survey Method

	Target Countries	Survey Field/Category	Survey Items
Ⅰ．Public Information Survey	• France • Germany • Korea • Norway • Malaysia • Spain	• Plans/strategies, government support, and rules/regulations related to the DX sector • Plans/strategies, government support, rules/regulations related to the Green sector • Government support for startups • Foreign Exchange and Foreign Trade Control Law	• Dissemination speed • Responsible people/organizations • Type of document • Response to enquiries • Word count • Scope of translation • Translation accuracy (*determined through a native check)
Ⅱ．Questionnaire Survey	• German government agency • Spanish government agency • Norwegian government agency	Detailed information on dissemination methods was not ascertained in this survey	• Dissemination channels • Translation languages • Scope of translation • Translation method • Time taken to disseminate the information
Ⅲ．Interviews (Japan)	• Financial Services Agency • Ministry of the Environment	Practical issues related to dissemination of information and English translations	• Methods of disseminating English information • Translation methods • Constraints in disseminating information in English • Results and effects of English information dissemination • Types of information for which request for translation has been received

Proposing an ideal way to disseminate information in English in Japan

- Given below are the results for task 2
- Based on the state of English information dissemination in Japan, in task 3 we work on translating information into English.

<table>
<tr>
<th colspan="3">Trends in dissemination of information by governments of target countries and it's comparison with Japan</th>
</tr>
<tr>
<th>Survey Items</th>
<th>Trends in target countries</th>
<th>Results for Japan</th>
</tr>
<tr>
<td>Speed of dissemination</td>
<td>Same day - 1 week</td>
<td>**Slower** | Takes anywhere from one week to more than a month.</td>
</tr>
<tr>
<td>Volume of information made available to the public</td>
<td>In general, the whole document, etc. was translated, but for some institutions, only a part or summary was available in English.</td>
<td>**Limited** | Limited availability of web pages, etc. translated to English.</td>
</tr>
<tr>
<td>Translation accuracy</td>
<td>Five out of six countries were placed at a translation accuracy level 0f 5 out of 6.</td>
<td>Japan had a translation accuracy level of 2 out of 6.</td>
</tr>
</table>

Challenges for the Japanese government in disseminating English information

- Limited budget, personnel, and time to translate information into English.
- Looking at the websites as a whole, there is a lot of information that is not translated into English.

[Points to consider in Task 1]

- **Speed of dissemination** : Disseminating English information within one week in a manner that compensates for limited personnel and time available for translation.
- **Volume of the information**： All information in Japanese that is disseminated on websites, etc., shall be translated into English.
- **Accuracy of translation:** Different levels of accuracy in translation depending on the type of information.

Overview of Task 2

- NRI conducted interviews in order to determine the selection policy and criteria for information on policies and public documents that should be disseminated in English.

- Respondents: Employees or former employees of the following companies and institutions with experience in accessing information disseminated by government
    - Foreign Chambers of Commerce and Industry in Japan (2 cases)
    - Foreign companies that have already established a presence in Japan (9 cases)

- Duration: December 2022 to January 2023

- Questions:

    - The type of information obtained regarding FDI-related policies and measures issued by the Japanese government or government-related organizations, such as METI, Cabinet Office, Invest Japan, etc.
    - Opinions on the information provided by the government and its dissemination methods, and points for improvement
    - The type of information to be translated into English

Table 4-1: A list of interviewees

Category	Target	Interview language
Chamber of Commerce & Industry	Institution ①	English
	Institution ②	English
Companies	Company ①	Japanese
	Company ②	English
	Company ③	Japanese
	Company ④	Japanese
	Company ⑤	Japanese
	Company ⑥	Japanese
	Company ⑦	English
	Company ⑧	English
	Company ⑨	Japanese

Proposing an ideal way to disseminate information in English in Japan

- Given below is a summary of the English-language information dissemination sought by foreign-affiliated companies
- Based on the state of English information dissemination in Japan, in task 3 we work on translating information into English

Information considered to be important		Preferred methods of disseminating English-language information
• Information on rules and regulations, especially those relating to deregulation • Information on government support that is applicable to foreign and foreign-affiliated companies likely to encourage them to do business in Japan.	✕	• Greater volume of information: Plans and strategies • Speedy dissemination: Government support • Higher accuracy of English translations: Rules and regulations

[Points to consider in Task 3]
➤ Better access to English information on **plans and strategies**
➤ More accurate English translations for **rules and regulations**, especially on matters related to deregulation
➤ Speedy dissemination of information on **government support** that applies to foreign and foreign-affiliated companies to encourage business development in Japan

Overview of Task 3

■ Task 3 objectives:

> ➤ To study strategic information dissemination methods based on the results of Task 1 and 2)
>
> ➤ Implementing a trial based on the above strategic English-language information dissemination method and verify its effectiveness.Given below is a summary for the same:

1．Recommendations for strategic dissemination methods	2．Proof of verification for information dissemination
• Based on the results of Task 1 and Task 2, we propose effective information dissemination methods for government information sought by the recipients of the information.	• On a trial basis, NRI translated a portion of METI's website into English, reviewed its cost and effectiveness after translation, and identified the issues. • The following three translation methods (three tools were used for machine translation) were used to translate the documents into English. ➤ **Hands-on translation** (By a translator) ➤ **"AI + correction" translation** (involves a native check by translation post translating through an AI tool) ➤ **AI translation**

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Considering strategic dissemination methods | Selecting content & methods of information dissemination | Translating the information | Verifying the effectiveness

Proposed direction for English-language information dissemination in Japan

■ Given below is a summary of how the government and other information providers can respond to the reader's demand for the dissemination of information in English in future

Figure 5-8: Efficiency and efficacy of information dissemination for the recipients of information

Verification of the effectiveness

Speed of Dissemination	Translation Method
• The total time for "AI + quality check" translation was 87.9 hours, which is 73.0% less than the time required for hands-on translation. Therefore, the former can considerably help in speeding up the dissemination process. • Further, having reference information in advance can also help speed up the translation process.	• Documents translated using only an AI tool were difficult to understand because of inconsistent/inaccurate translation and formatting errors. • Respondents felt that there wasn't a significant difference in translation accuracy between hands-on and "AI + correction" translation.

Challenges to be addressed in the future

➢ Focusing on speedy dissemination of information in English
➢ For that, an initial "AI + quality check" translation may be released and changes may be made to it at a later stage to make it closer to a hands-on quality
➢ A possible way to reduce the time required for translation is to provide reference materials to the translation company.

➢ Relying solely on machine translation is not desirable at the current stage
➢ The more technical the language used in a document, the more accurate the hands-on translation will be. On the other hand, for a fairly simple document an "AI + quality check" level of translation would be sufficient

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An outline of the entire project

Task 1:Identifying Issues for English Information Providers

> **Comparison of Japan's English-language information dissemination with the target countries**
>   - Issues were found in the volume of information disclosed, dissemination speed, and translation accuracy respectively. **Speed of dissemination** came out to be a particular challenge.
> **Issues in implementation for the government**
>   - Limited budget, personnel and time available for English translations
>   - A very high demand of translation for large volumes of Japanese-language information.

Task 2:Identifying the needs of recipients of English-language information

> **Content of the information to be disseminated:**
>   - Information on government support and rules and regulations governing the conduct of business of foreign-owned companies.
> **Order of priority for information dissemination:**
>   - Volume: Plan/Strategy
>   - Speed of Dissemination: Government support
>   - Accuracy: Rules and regulations

Task 3: Strategic implementation-based trial initiatives

> **Strategic dissemination of information in English**
>   •Given the need to ensure the comprehensiveness of the information, the full text of documents related to startup policy rules and regulations and government support were translated into English.
>   •In order to determine the most effective and efficient translation method, we compared documents that were translated using hands-on translation, AI + quality check translation and just AI translation.
> **Evaluating the impact of English information once it has been disseminated**
>   •The recipients emphasized the speed of dissemination of English information. This is why, an initial AI+ level of translation was considered acceptable. Changes can later be made later on to make it closer to the hands-on level of quality.
>   •A possible way to increase the efficiency of translation is to provide translation companies with reference materials.
>   •Relying solely on machine translation is not desirable at the current stage. The more technical the language used in a document, the more accurate the hands-on translation will be. On the other hand, for a fairly simple document an AI+ level of translation would be sufficient.

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