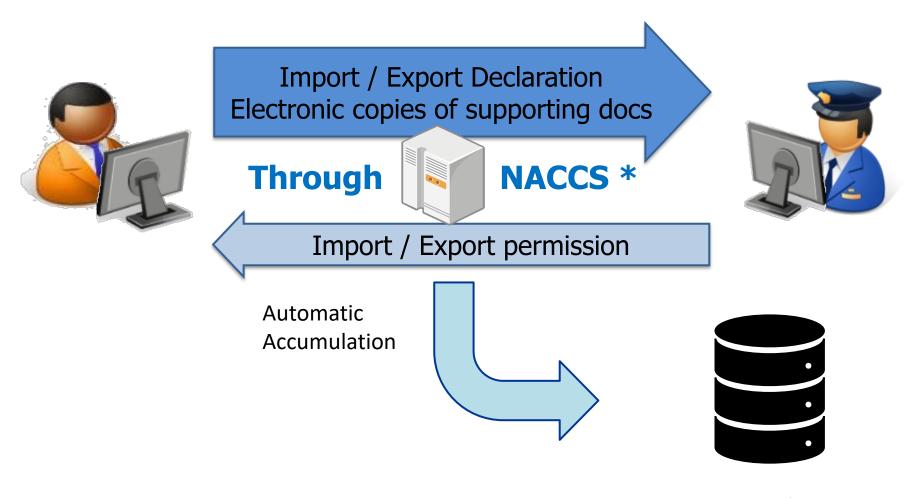# Experiences on Accumulation and Utilization of Data in Japan Customs
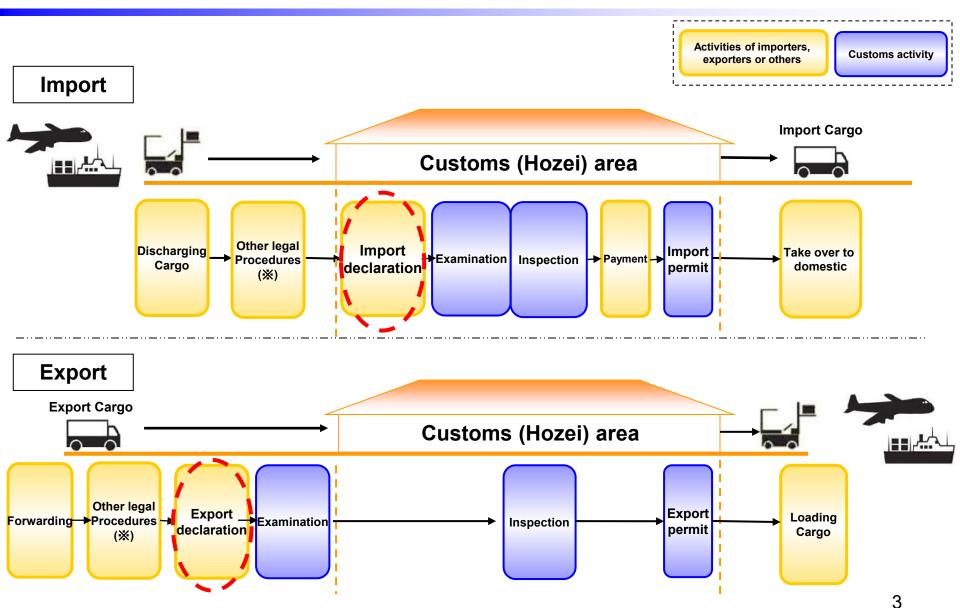
16-17 April 2024
WTO Trade Facilitation Committee

１．Data Accumulation through Single Window
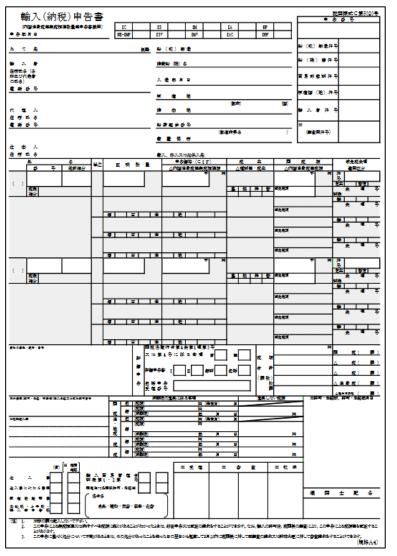
Import / Export Declaration
Electronic copies of supporting docs

Through **NACCS ***

Import / Export permission

Automatic
Accumulation

Import and export
declaration data

2. About Customs Declaration Data in Japan

Activities of importers, exporters or others   **Customs activity**

Import

Customs (Hozei) area

Import Cargo

Discharging Cargo → Other legal Procedures (※) → **Import declaration** → Examination → Inspection → Payment → Import permit → Take over to domestic

Export

Export Cargo

Customs (Hozei) area

Forwarding → Other legal Procedures (※) → **Export declaration** → Examination → Inspection → Export permit → Loading Cargo
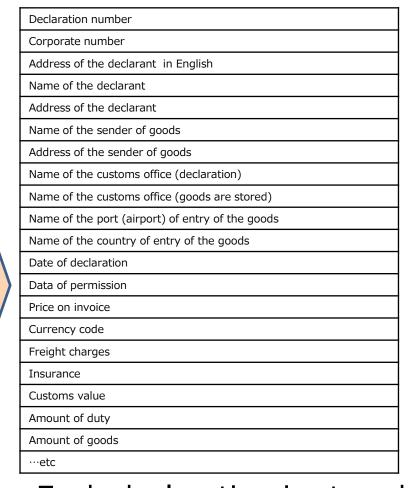
※Other legal procedures：Some goods to be exported require permits or approvals according to the laws and regulations other than the Customs Law such as Food Sanitation Law , Plant Quarantine Law, and so on.

3

2. About Customs Declaration Data in Japan

✓ Import Declaration Form

Declaration number
Corporate number
Address of the declarant in English
Name of the declarant
Address of the declarant
Name of the sender of goods
Address of the sender of goods
Name of the customs office (declaration)
Name of the customs office (goods are stored)
Name of the port (airport) of entry of the goods
Name of the country of entry of the goods
Date of declaration
Data of permission
Price on invoice
Currency code
Freight charges
Insurance
Customs value
Amount of duty
Amount of goods
…etc

⇒ Each declaration is stored in the Customs database.

4

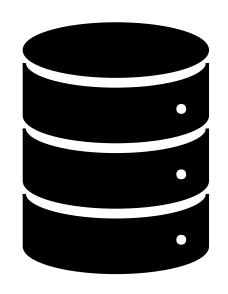# 2. About Customs Declaration Data in Japan

✓ It is a data file of information on import/export declarations made to customs on a daily basis, including information on importers and exporters, trading partners, cargo prices and product names, etc., for each import/export declaration.

Image of import declaration data

Import declaration #	Import declaration date	Name of Shipper	Importer number	Name of importer	HS code	Price on Invoice	Currency code	freight	Taxation base(value)	Customs duty	Taxation base(amount)	Unit
1234567890	2014/01/01	SOY SAUCE INTERNATIONAL LTD	1234567890123−9000	ZAIMUSOKEN CO., LTD	2103100005	200,000	JPY	50,000	250,000	18,000	2,000	KG
2345678901	2016/05/15	KAWARA S.A.	2345678901234−0000	KANZEIKYOKU CO., LTD	6905100005	2,000	USD	500	273,750	5,475	5	MT
3456789012	2020/12/31	BALL LLP	3456789012345−0000	SMART ZEIKAN LLC	9506320003	2,000	EUR	500	324,550	0	2,500	NO

（※）This is fictional data. No entity in this table exists.

3. How to Utilize the data

Single Window (including Customs declaration system) not only facilitate customs procedures, but also brought data as one of the byproduct.

Data has potential for effective use such as:

✔ Machine learning (AI and other advanced technologies) to pursue customs mission (such as selection)

✔ Statistical studies for academic findings

Import and export declaration data

Big Data Analysis Overview

- Analysis of huge amounts of data（big data）such as import declarations accumulated by Japan Customs

- Considering its application in the examination and inspection selection process and the selection of sites for post clearance audit
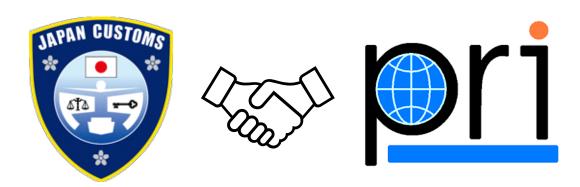
▪ Big Data Analysis
▪ Supporting officer's decisions

3. Statistical studies using academic findings

✓ The JP government committed to utilize government possessing data (6.18.2021)
✓ The MOF started to use import and export declaration data for academic research which is useful for policy making, **under strict confidentiality obligation and rules**.
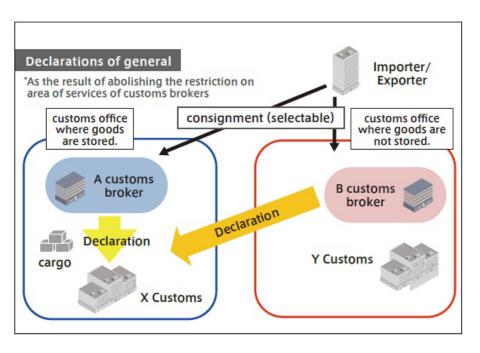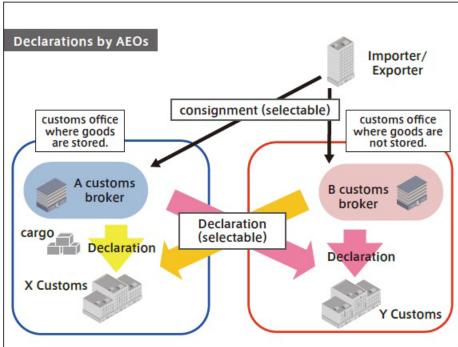✓ The Policy Research Institute (PRI)* has started research by using those data provided from the Customs since 2022.

* The Policy Research Institute, originally the Institute of Fiscal and Monetary Policy (established in May 1985), is an organization to be inaugurated by the Ministry of Finance in July 2000. Its purpose is to conduct comprehensive surveys and studies with a greater policy-oriented focus, amid the big socio-economic changes underway in Japan, such as the globalization and liberalization of the economy in recent years and the rapid advancement of the falling birthrate and the aging of the population.

3. policy effectiveness research of trade facilitation measures

Research for "Broadening the choice of customs office for import/export declaration" (Research Paper)

・From October 2017, AEO importers, exporters and customs brokers can also declare their goods to customs offices other than the place where the goods are stored.
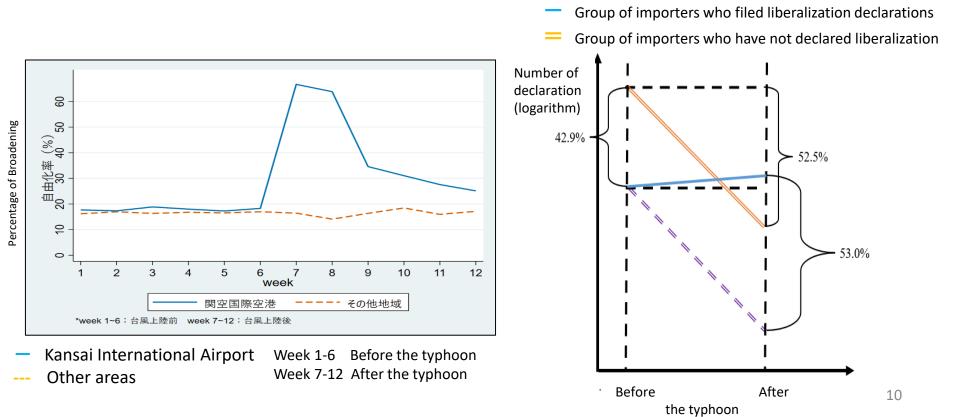
Research for "Broadening the choice of customs office for import/export declaration" (Research Paper)

・The hypothesis that this system helps imports to continue their business in the event of a typhoon disaster is tested.

— Group of importers who filed liberalization declarations

= Group of importers who have not declared liberalization

Number of declaration (logarithm)

42.9%

52.5%

53.0%

Before / After
the typhoon

Percentage of Broadening

自由化率（%）

week

関空国際空港　　　　　　その他地域

*week 1~6：台風上陸前　　week 7~12：台風上陸後

— Kansai International Airport

--- Other areas

Week 1-6　Before the typhoon

Week 7-12　After the typhoon

10

3. Utilize the knowledge of outside experts

- 1st Joint study (spring 2022〜)

Theme	Member	Research Outcomes
A Study on the Actual Situation of Japan's Trade and the Influence of Trade Policy Based on Import/Export Declaration Data	Naoto Jinji Kyoto University −5 others	• An Empirical Investigation on International Trade Using Japan's Customs Data（2023/9）
An Analysis of the Determinants of Quotation Currency Choice, Exchange Rate Pass−through, and Trade Volume for Japanese Firms: Does the Expansion of Intra−Firm Trade Change the Impact of Exchange Rate Fluctuations?	Junko Shimizu Gakushuin University −4 others	• Invoice Currency Choice of Japanese Companies－What Can Be Learned from the Share of Invoice Currency by Country Based on Customs Micro Data－（2022/12） • Invoice Currency Choice in Intra−Firm Trade: A Transaction−Level Analysis of Japanese Automobile Exports（2023年9月）

*The English names of the research themes are tentative translations of the Japanese names and are not the official names.

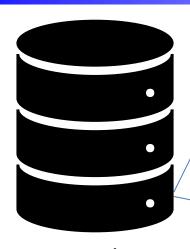# 3. Utilize the knowledge of outside experts

- 2nd Joint study (spring 2023〜)

Theme	Member
Research on Tax Evasion and Avoidance Using Import/Export Declaration Data	Masayoshi Hayashi The University of Tokyo −3 others
Firm Productivity and Competitiveness and International Networks: An Empirical Analysis Joining Customs Data and Firm Data	Kyoji Fukao Hitotsubashi University -5 others

- 3rd Joint study (spring 2024〜)

Theme	Member
Innovation, Globalization and Employment - From the Perspective of Inter-firm Networks	Yukiko Saito Waseda University -2 others
Restructuring of business-to-business trade relationships through Free Trade Agreements and Economic Partnership Agreements (EPAs)	Yoichi Sugita Keio University -4 others
Natural Disasters, Human Injury, and Supply Chain Resilience in Japan, Asia, and the Global Economy: An Empirical Study Joining Import/Export Declaration Data and Firm Data for Japan and Other Countries	Yasuyuki Sawada The University of Tokyo -4 others

*The English names of the research themes are tentative translations of the Japanese names and are not the official names.

4. Points to keep in mind when using Data

（※）This is fictional data. No entity in this table exists.

Import declaration #	Import declaration date	Name of Shipper	Importer number	Name of importer	HS code	Price on Invoice	Currency code	freight	Taxation base(value)	Customs duty	Taxation base(amount)	Unit
1234567 8900	2014/ 01/01	SOY SAUCE INTERNATIONAL LTD	1234567890123 -9000	ZAIMUSOKEN CO., LTD	2103100000 5	200,000	JPY	50,000	250,000	18,000	2,000	KG
2345678 8901	2016/ 05/15	KAWARA S.A.	2345678901234 -0000	KANZEIKYOKU CO., LTD	6905100005	2,000	USD	500	273,750	5,475	5	MT
3456789 90120	2020/ 12/31	BALL LLP	3456789012345 -0000	SMART ZEIKAN LLC	9506320003	2,000	EUR	500	324,550	0	2,500	NO

Import and export declaration data

Utilizing Data includes:
✔trade related companies (individuals) personal information
✔ confidential information (such as unit price)
✔ Processing data needs Statistical Technic

4. Points to keep in mind when using Data

☑ Restriction on Purpose of Use

Limited to administrative purposes of the MOF

Limited to statistical research purposes
Unavailable for analysis to identify the individual importers / exporters

☑ Personal Data Protection

Imposed confidentiality obligations as governmental officers
Data is available only on stand-alone PC at restricted area of the MOF

Reviewed and examined by the MOF before its publication

☑ Securing human resources specialized in data analysis

Recruiting of Ph.D. holders
Training program to develop expertise in the field of data science, etc.

5. Conclusion

From our experiences…

Tips

- ✓ Customs clearance through System

  Not only efficiency, but also systematic data accumulation

- ✓ Appropriate use of data

  Confidentiality obligation, Guidelines on handling the data

- ✓ Develop expertise to utilize and analyze data

  Knowledge of data science and customs administration

➡ Valuable for Members considering introduction or renewal of customs clearance systems

Japan will accelerate action to promote trade digitalization.

Thank you for your kind attention