



STATISTICS

Compilers Hub

A Digital Platform for the
International Community of
Macroeconomic
Statisticians

Andrew Baer, Sr. Economist, IMF Statistics

Goal for this project:

- 1. Establish and manage an International Community of Practice for Macroeconomic Statisticians.**
- 2. Design and develop a digital solution for the International Community of Macroeconomic Statisticians that would allow them to**
 - Centralize and share knowledge,
 - Engage in global collaboration, and
 - Convene topical conversations

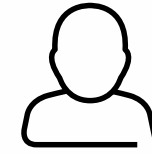
Who are the members of the community?



The Collaborator



The Learner



The Expert

GOAL

Uses this space to impart knowledge or connect with others in their statistical domain or regional group.

Comes to this site to learn, attend trainings or discover resources needed for their job.

Joins this portal to impart expertise to those who are seeking professional assistance.

ATTITUDES

- Eager to engage with others in field
- Busy, easily annoyed by inorganization of resources

- Worried about getting the correct guidance for an inquiry
- Looking to prove their value to their employer

- Concerned about not having a way to share their experience
- Independent, but likes to contribute

NEEDS

- A way to understand the value they add
- One-stop shop for resources & connection
- Quick tools for engagement

- Clear and detailed information
- An open way to converse and exchange with more advanced peers

- International consensus on guidance
- Easy-to-use platform
- Relevant information for their projects

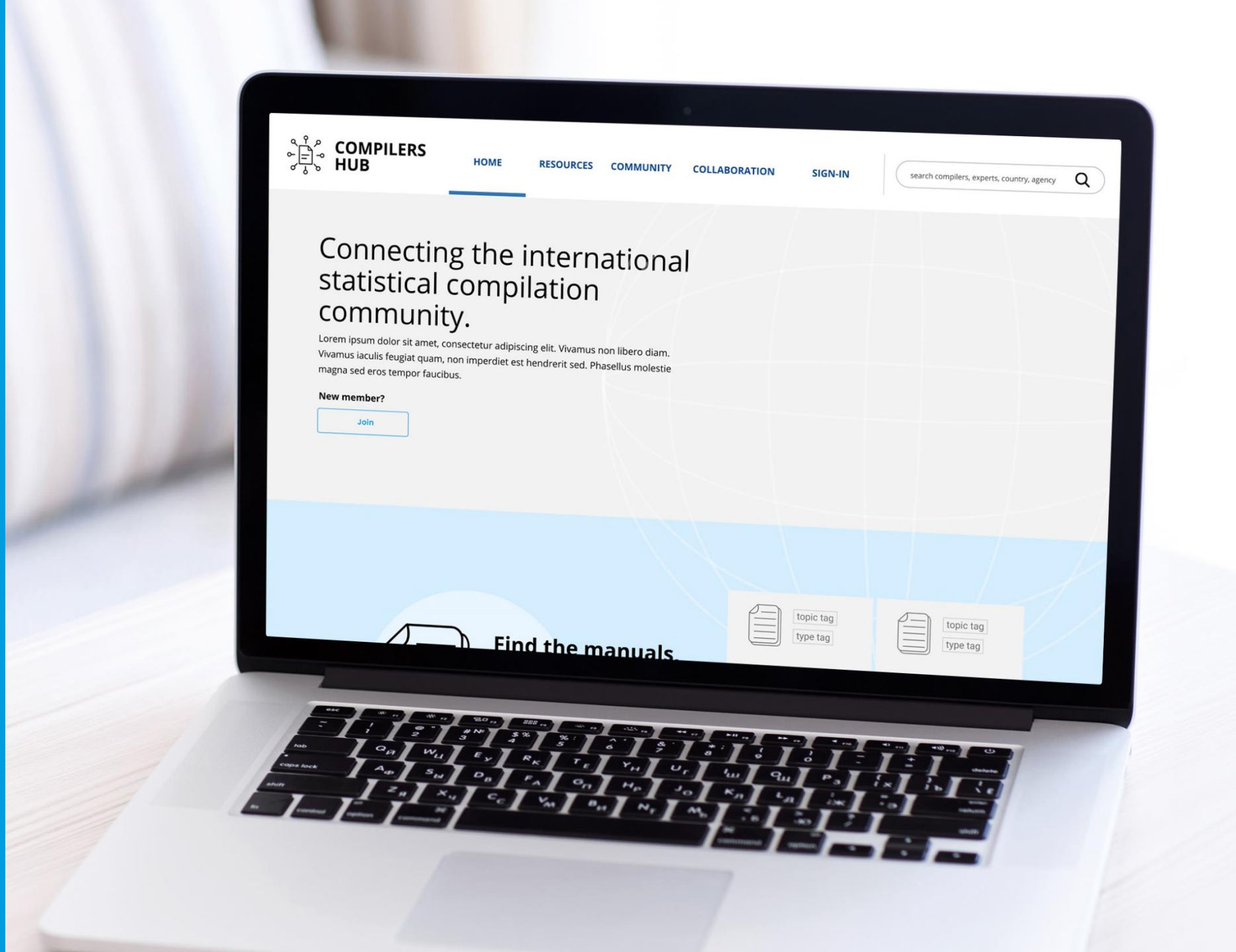


The Structure

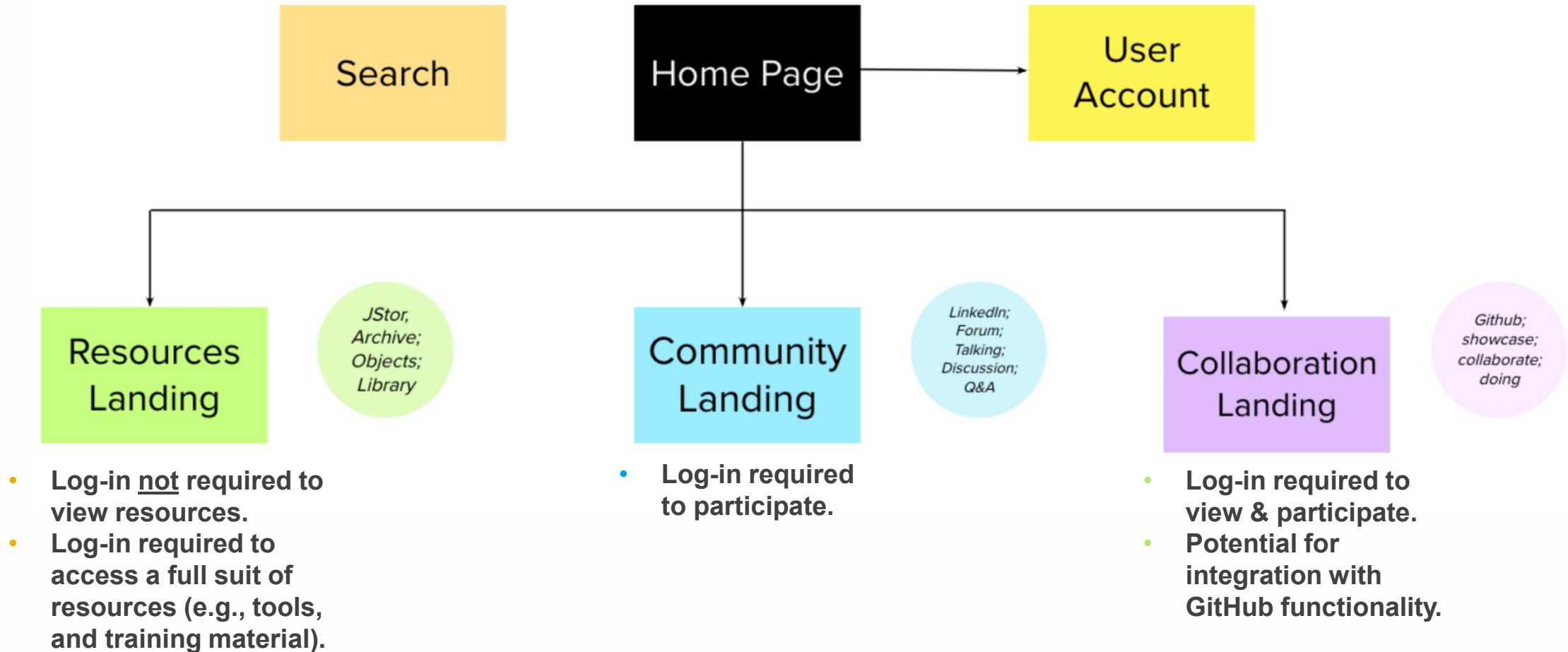
User research revealed that the target audiences' needs can be classified in 3 distinct buckets:

Resources
Community
Collaboration

The information architecture was structured around these needs, and it reflects the users' mental model.



Site Structure Overview





RESOURCES

This section of the hub will be where users find:

Manuals (Documents),

Training material,

Conferences (Events),

Tools

All of the resources will be tagged with the domains and topics they relate to, making it easy for users to filter and access the information they need quickly.

The screenshot shows the IMF Resources Home page. At the top, there is a navigation bar with 'Compilers Hub' and 'Resources Home'. Below this, there are tabs for 'Resources', 'Community Forum', 'Project Collaboration', 'My Profile', 'Admin', and 'Edit'. A search bar is located in the top right corner. The main content area features a large banner for the 'CONSUMER PRICE INDEX MANUAL Concepts and Methods | 2020'. Below the banner, there is a section titled 'RESOURCES' with a description: 'Access essential resources like international statistical manuals, training videos, and compilation tools, related to macroeconomic statistics. The platform is designed to give country compilers essential resources in one convenient location. The platform offers access to international statistical manuals, training materials, and tools for data compilation, while also promoting capacity development and peer learning. Furthermore, international and regional agencies, along with national statistical offices, can contribute by uploading resources and sharing links to published research, working papers, conference papers, and other relevant documents related to macroeconomic statistics measurement.' A callout box points to a 'Rotator that enables selected resources to be featured.' Below this, there is a section for 'Explore "StatSChat" (AI Chatbot)' with a callout box stating 'Search bot with ChatGPT enabled technology to expedite searches'. At the bottom, there are four main categories: 'Documents' (Manuals, handbooks, and related publications), 'Training materials' (Presentations, videos, and training material), 'Events' (Find information on upcoming and past meetings and conferences), and 'Data & Tools' (Tools for macroeconomic statistics compilation and synthetic data). A callout box points to these categories, stating 'Resources are classified in 4 main areas: Manuals, Conferences, Trainings and Compilation Tools.'

'StatSChat'

=> All manuals com

=> Difficult to read

The Bot will:

- Make interaction
- Leverage new AI
- Make the solution
- Be integrated with

The screenshot displays the StatSChat interface. At the top, four book covers are shown: 'System of National Accounts 2008', 'Balance of Payments and International Investment Position Manual', 'FINANCIAL SOUNDNESS INDICATORS COMPILATION GUIDE', and 'GOVERNMENT FINANCE STATISTICS MANUAL 2014'. Below the covers is the 'StatSChat' logo and the tagline 'Talk to the Statistical Standards'. A row of four question prompts is visible: 'What does #SNA define for GDP?', 'Explain financial accounts in #BPM', 'How does #FSI measure credit risk?', and 'Define government deficit in #GFS'. A dropdown menu is open, listing several standards with checkboxes: 'Balance of Payments and International Investment Positions Manual (BPM 7)', 'Government Financial Statistics Manual (2001)', 'Monetary and Financial Statistics Manual and Compilation Guide (2008)', 'Handbook on Securities Statistics', 'System of National Accounts (2025)', 'System of Environmental and Economic Account - Central Framework (2012)', and 'Financial Soundness Indicators Compilation Guide'. The menu also includes 'Select All' and 'Unselect All' buttons. Below the dropdown is a text input field labeled 'Select a standard(s)'. At the bottom, there is a large text input area with the placeholder 'Type a new question...' and a send button on the right.



COMMUNITY

Here, users will have the opportunity to interact with other compilers and expand their network.

They can join existing topics or create new ones; participate in discussions and post the questions they might have.

The screenshot shows the IMF Community Forum interface. At the top, there's a navigation bar with 'IMF' logo, 'Compilers Hub > Community Home', and links for 'Resources', 'Community Forum', 'Project Collaboration', 'My Profile', 'Admin', 'Edit', and 'Private group'. Below this, there's a main content area with a welcome message and a list of discussion topics. A search bar is visible on the right. The interface is annotated with callouts explaining key features:

- Ability to subscribe to a thread or start a new question/discussion**: Points to the '+ Add new Question', 'Subscribe', and '(Un)Subscribe Users' buttons.
- Based on the domains and topics of the user, the groups that might interest them will be displayed here.**: Points to the 'Topics of Discussion - National Accounts' section.
- Most recent questions will be highlighted to help experts more easily find the less experienced users who need help.**: Points to the 'Discussions - National Accounts 2008' and 'Discussion - National Accounts 2009' entries.
- The users who participate in conversations and answer questions the most will gain additional visibility to encourage this behavior.**: Points to the user profile of 'Sharath Rao Fantastic' who posted a question on 5/21/2025.

Topics of Discussion - National Accounts	Answered Questions	Questions/Discussions	Last Discussion
Discussions - National Accounts 2008 Discussions - National Accounts 2008	Answered: 0 Unanswered: 0	Questions: 0 Discussions: 0	
Discussion - National Accounts 2009 Discussion - National Accounts 2009	Answered: 0 Unanswered: 0	Questions: 0 Discussions: 0	
Monetary and financial statistics			Last Discussion
Measuring currency in circulation (CIC) outside an economy Measuring currency in circulation (CIC) outside an economy			External User Can post a question Sharath Rao Fantastic 5/21/2025, 2:20:21 AM



COLLABORATION

One of the most sophisticated features of the hub is to give the users the ability to collaborate on projects.

Like GitHub, this space brings together all the resources related to a project — allowing users to **co-develop** a compilation tool, host the files, do version controlling and distribution — and facilitates collaboration while the project is ongoing.

Once it's complete, the activities and outcomes are archived and showcased to inspire new projects.

The screenshot shows the 'Compilers Hub > Collaboration Home' interface. The navigation bar includes 'Resources', 'Community Forum', 'Project Collaboration', 'My Profile', 'Admin', and 'Edit'. A sidebar on the left contains icons for home, search, list, document, and expand. The main content area features a 'PROJECTS' section with a 'Have an idea for a project?' button and a 'Start One' link. A 'Consultation' section is also visible at the bottom right.

PROJECTS

Welcome to a dynamic collaborative environment. This site equips members with various collaboration programs: relevant sections, a diverse range of disciplines are presented, and various tools are provided, enhancing the overall experience.

Open Calls for collaborators ⓘ

Projects seeking collaborators with your skills...

Have an idea for a project? ⓘ

Start One

AI

Users can also start a new project to collaborate with other compilers.

Institutions can call for participation on their surveys.

Users can collaborate on co-development such as R programming, compilation tools, empirical testing...

Users can collaborate on co-authoring new documents, papers, handbooks, guidance notes...

Users can collaborate on collating feedback on a completed project and seek consultation on an ongoing project.

Consultation ⓘ

Elicit insights, views, contributions, and endorsements on statistical developments.



USER PROFILE

Profile pages are where users can get detailed information on other users' backgrounds, expertise and their contributions to the projects that are being built on the hub.

It's also an area where users can come back to for quick access to the documents they have saved.

The image shows a user profile page for Robert Plant. The profile includes a circular profile picture of a cat, a 'My Account' button, and the following information: Name: Robert Plant, Title: Alternate Chief, Country: Namia, Organization: Ministry of Crunching Numbers. Below this are buttons for Domains, Topics, Interests, Skillset, and All. To the right, there is a 'User social media info' section with an email address 'cat@mocn.org' and an 'Add/Edit' link. The main content area has tabs for Overview, My Contribution, My Requests, My Bookmarks, My Notifications, and My Approvals. Below the tabs are sections for My Community Discussions, My Active Resources, My Active Projects, and Followers. Callouts explain that recent posts will be listed on the profile page, work cited in other articles will appear in the My Active Resources section, and users' profiles will be populated with their authored content. The My Active Projects section shows a message 'There are no projects available.' and the Followers section shows 'No followers.'

In addition to the institution the user works for, they will also indicate the statistical domains they work in.

Users can message each other directly on the platform. They can also provide a link to their LinkedIn profiles.

When their work is cited in other articles, they will appear here.

Their most recent posts will be listed on their profile page, making it easy to keep track of their contributions.

Users' profiles will automatically be populated with the content they have authored

compilershub.imf.org



STATISTICS

Measuring Marketing Assets Compilation Guide

Andrew Baer, Sr. Economist, IMF Statistics

Marketing Assets

- Proposed definition - *“The capitalized value of expenditures on advertising and promotional activities (whether purchased or produced on own account), to enhance the overall impression a customer or potential customer gains from their experience with the company and its products.”*
- Marketing assets are currently outside of the production boundary.
- 2025 SNA encourages the compilation of extended accounts in which marketing assets are recognized as produced non-financial assets.

Compilation Guide

- Draft guide on the compiling these extended accounts was recently sent to the InterSecretariat Working Group on National Accounts for review and comment
- Chapter 4 of the Guide is on Price and Volume Estimates
- Benefited greatly from earlier Voorburg sector papers for media and advertising industries

Purchased marketing services - output

- Ideal:
 - Directly collected expenditures on marketing services
 - Possible to distinguish marketing for short-term benefit vs. long-term benefit?
 - Short-term = intermediate consumption (e.g. ads for events – movies, time-limited sales)
 - Long-term = gross fixed capital formation (e.g. sponsorships, general brand marketing)
- Fallbacks:
 - Directly collected domestic production of marketing services
 - Commodity flow method – (domestic production + imports) – (exports and consumption)

Purchased marketing services - deflators

- Ideal:
 - Purchaser's prices
 - Include domestic and import purchases by resident firms
- But:
 - Almost no input price indices covering marketing and advertising services
 - Only one identified import price index for these services (Sweden)
- Available data series:
 - Output PPIs for services activities
 - Basic prices, includes exports but not imports

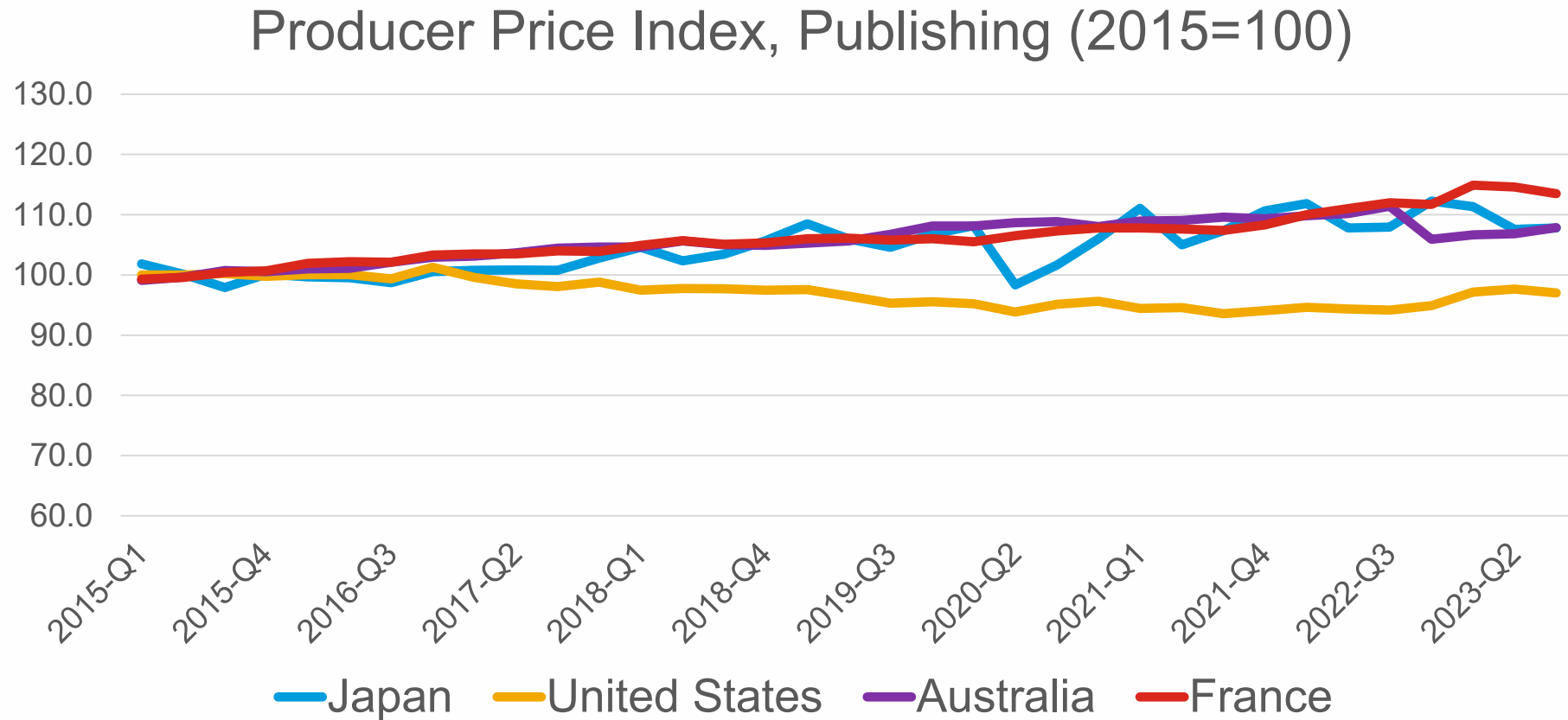
Availability of services PPIs

Country	ISIC J58, Publishing	ISIC J60, Programming and broadcasting	ISIC M73, Advertising and market research
European Union members	X	X	X
United Kingdom	X		X
Norway	X		X
Switzerland			X
*Turkiye	X	X	X
Israel	X	X	X
Republic of Korea	X	X	X
Japan	X	X	X
*Vietnam	X	X	X
New Zealand	X	X	X
Australia	X		X
United States	X	X	X
*Mexico	X	X	X

* Published indices at sector level only, detailed industry indices for these services not published

European Union regulations mandated coverage of J58 and J60 starting in 2021

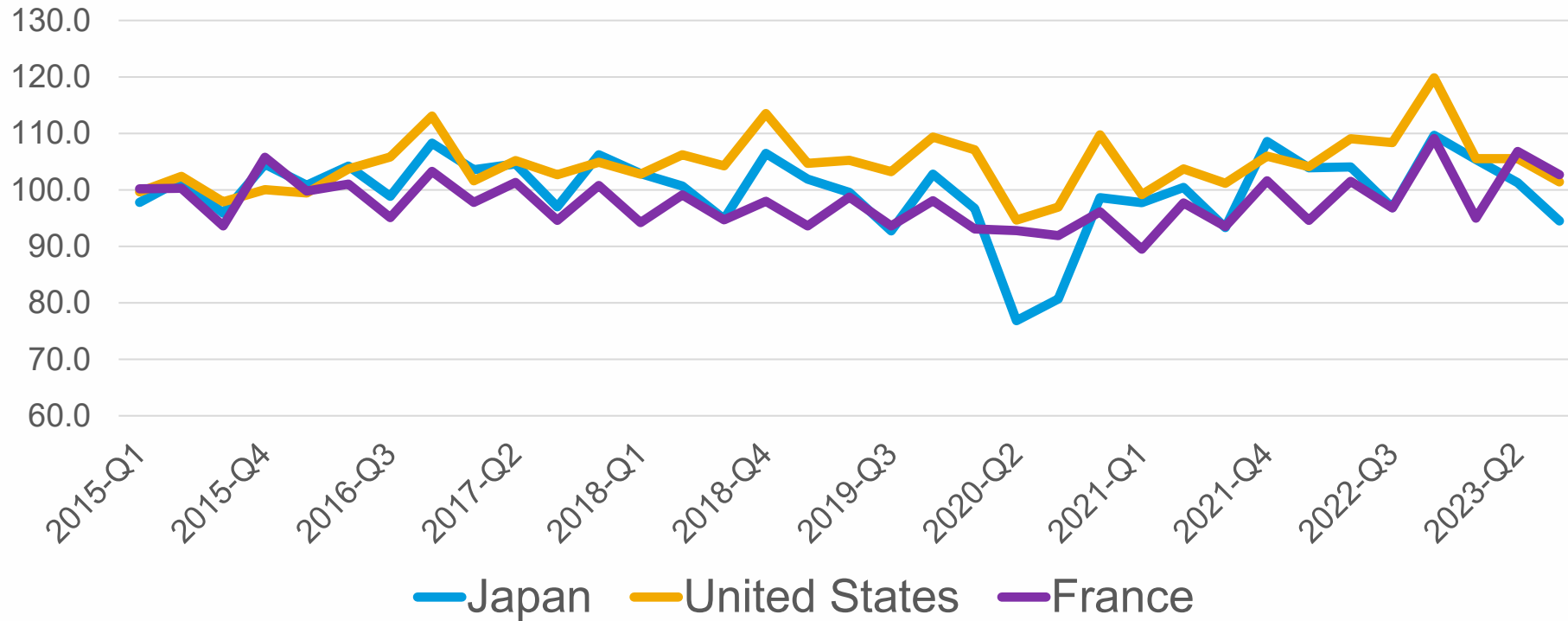
PPIs for sale of advertising space



* - There are significant differences of scope – US excludes Internet and is advertising only, Japan includes Internet and is advertising only, France and Australia include subscription sales

PPIs for sale of advertising time

Producer Price Index, Programming and Broadcasting (2015=100)



Advertising Output Prices – Quality Adjustment

- Should change in audience size be reflected as price or volume change?
- The chapter recommends reflecting as volume change
 - Consistent with guidance in Eurostat Handbook on Price and Volumes
 - Consistent with user value approach for valuing output
- Some countries using theoretical fixed-input output price index model say price change
 - Consistent with resource cost approach for valuing output
 - No direct relationship between production costs and audience size
 - Audience size not known until well after production and initial ad sales

Advertising Output Prices – Quality Adjustment Example

- Country with a single broadcasting company
- Earns 100% of revenue from selling 30-second advertisements
- Viewership increases from 80 million in 2023 to 120 million in 2024
- Average price per ad increases from 20 to 30
- Major differences between indices with and without audience size adjustment

Broadcasting Company Sales and Prices

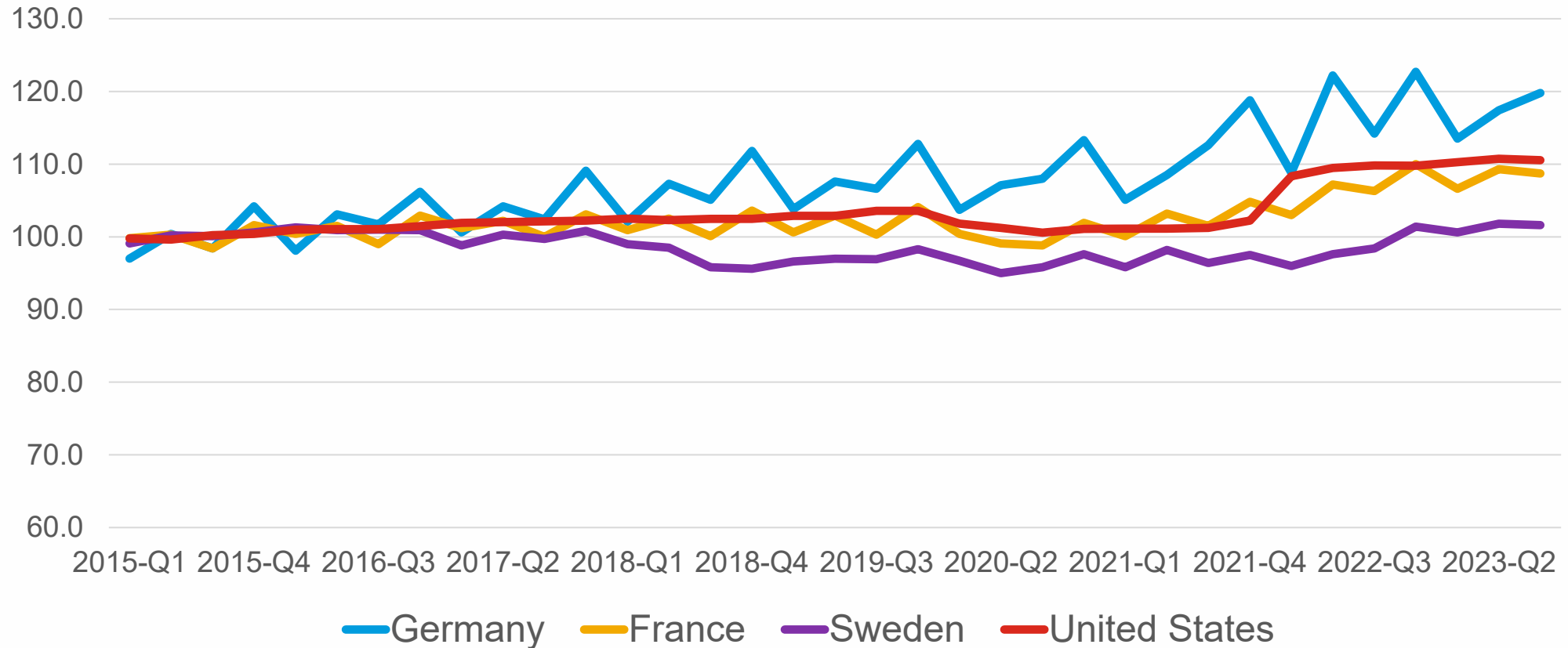
	Number of ads sold	Sales	Average price per ad sold	Number of ad views (thousands)	Average CPM
	a	b	$c = b / a$	d	$e = b / d$
2023	10 million	200 million	20	80,000	2.5
2024	10 million	300 million	30	120,000	2.5

Price and Volume Measures

	Output, current prices	Price index A (per ad sold)	Output, 2023 prices, using price Index A	Price index B (CPM)	Output, 2023 prices, using price index B
2023	200 million	100	200 million	100	200 million
2024	300 million	150	200 million	100	300 million

PPIs for advertising agency and market research services

Producer Price Index, Advertising and Market Research (2015=100)



Advertising agency services

- Advertising agencies provide two main services:
 - Creative services
 - Prices largely based on hours worked by professional staff
 - Production costs and markups also affect prices
 - Placement services
 - Acting as intermediary between advertiser and media ad sellers
 - Strategize purchases
 - Often priced as a percentage of the value of the campaign budget
 - Should be priced on net basis as with other intermediation services

Own-account production of marketing

- Output measured at sum of costs
- Two recommended methods for deflators:
 - 1) Pseudo-output indices
 - Use input indices weighted based on contribution to sum of costs
 - Labor in selected occupations likely to be dominant input
 - Add quality adjustment factor
 - Could be based on total factor productivity for industries that employ selected occupations (likely ISIC 73)
 - 2) Output indices for comparable market services
 - Likely to be activities in ISIC 73