



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

compilershub.imf.org

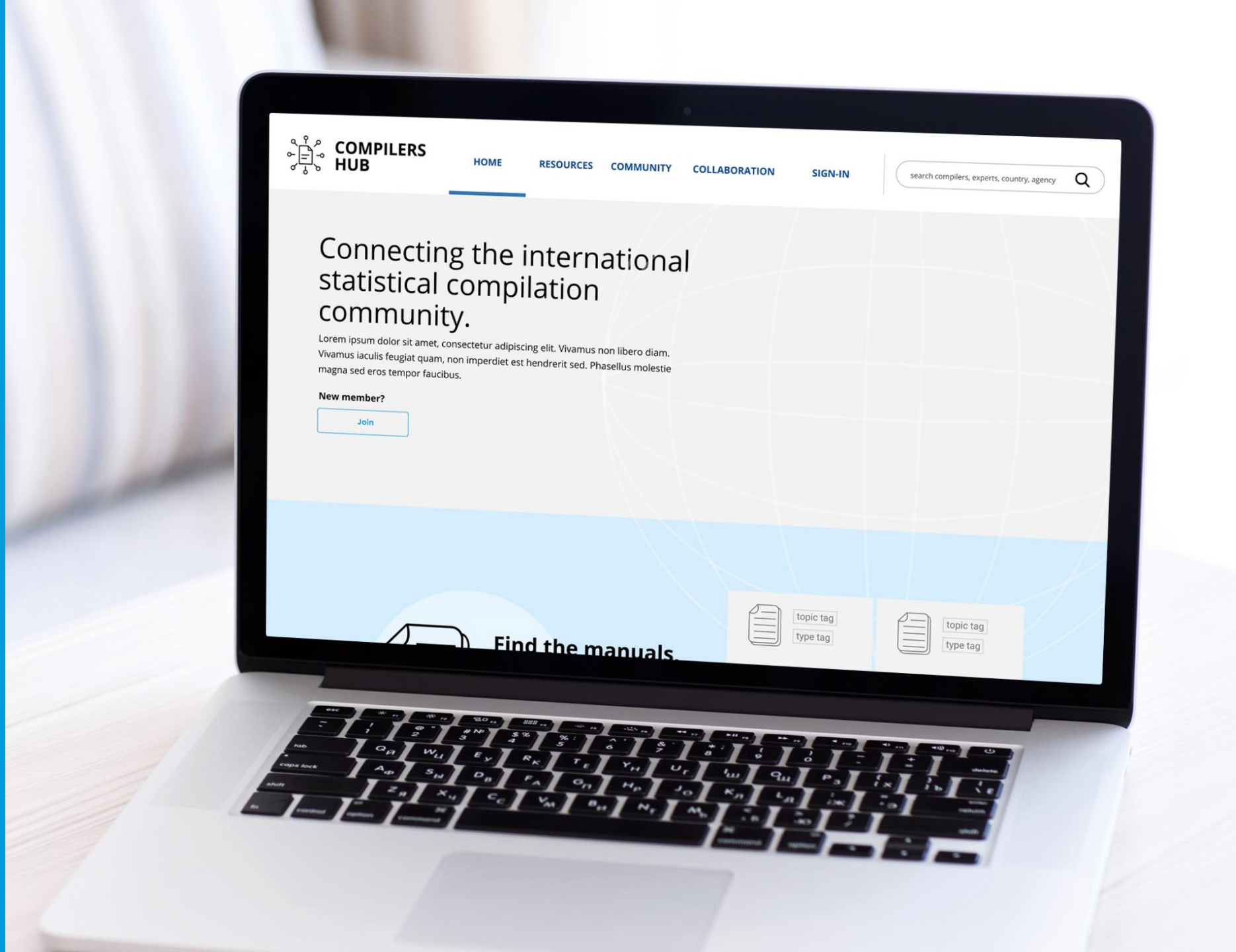


The Structure

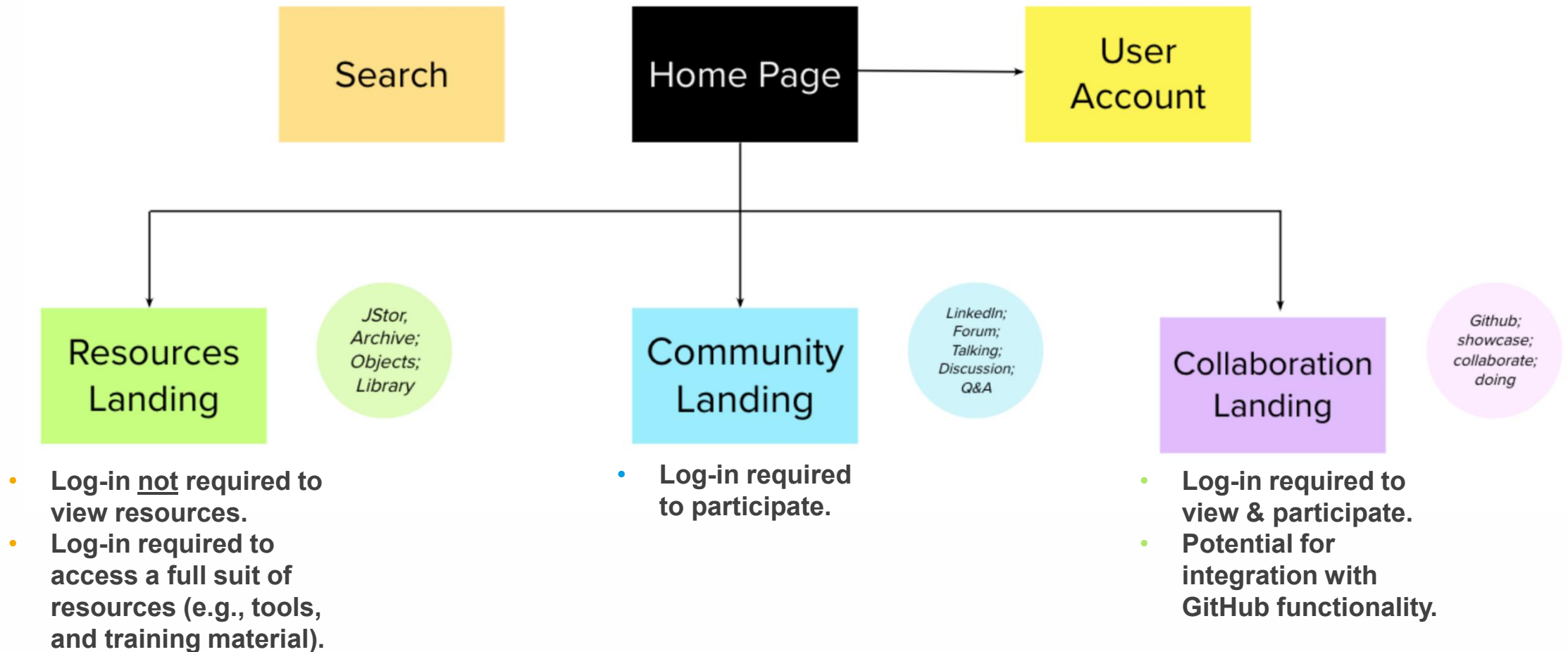
User research revealed that the target audiences' needs can be classified in 3 distinct buckets:

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. The header includes the IMF logo, navigation links (Compilers Hub, Resources Home), and a search bar. The main content area features a large banner for the 'CONSUMER PRICE INDEX MANUAL' with the subtitle 'Concepts and Methods | 2020'. Below the banner, there is a section titled 'RESOURCES' with a description of the platform's purpose. A callout 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 stating 'Search bot with ChatGPT enabled technology to expedite searches'. At the bottom, there are four categories: Documents, Training materials, Events, and Data & Tools, each with an icon and a brief description. A callout points to these categories, stating 'Resources are classified in 4 main areas: Manuals, Conferences, Trainings and Compilation Tools.'

RESOURCES

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.

CONSUMER PRICE INDEX MANUAL
Concepts and Methods | 2020

Rotator that enables selected resources to be featured.

Developed by the Statistics Department of the International Monetary Fund (IMF), its designed to assist statisticians, economists, and data users in navigating international statistical manuals with a focus on accuracy, the app delivers precise responses to complex statistical inquiries, ensuring no hallucinations. Each answer is backed by direct references and links to official documentation, allowing users to verify and explore further.

Explore "StatSChat" (AI Chatbot)

Search bot with ChatGPT enabled technology to expedite searches

Resources are classified in 4 main areas: Manuals, Conferences, Trainings and Compilation Tools.

- Documents** ①
Manuals, handbooks, and related publications.
- Training materials** ①
Presentations, videos, and training material.
- Events** ①
Find information on upcoming and past meetings and conferences.
- Data & Tools** ①
Tools for macroeconomic statistics compilation and synthetic data.

'StatSChat'

=> All manuals come

=> 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, there are five book covers representing statistical manuals: 'System of National Accounts 2008', 'Balance of Payments and International Investment Position Manual', 'FINANCIAL SOUNDNESS INDICATORS COMPILED GUIDE', 'GOVERNMENT FINANCE STATISTICS MANUAL 2014', and 'GOVERNMENT FINANCE STATISTICS MANUAL 2014'. Below these is the 'StatSChat' logo and the tagline 'Talk to the Statistical Standards'. A row of four question prompts is shown: '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, showing a list of manuals 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 'Select All' button is at the top of the dropdown, and the 'Unselect All' button is at the bottom. Below the dropdown is a text input field labeled 'Select a standard(s)'. At the bottom of the interface is a chat input area with a placeholder 'Type a new question...' and a send button (arrow icon).



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.

IMF

Compilers Hub > Community Home

Resources **Community Forum** Project Collaboration My Profile Admin Edit Private group

Ability to subscribe to a thread or start a new question/discussion

FORUM > Discussions - National Accounts 2008

Welcome to a collaborative space for compilers and macroeconomic statistics projects.

The Community Forum is structured to facilitate meaningful discussions with conversations organized by main topics. Each topic features dedicated channels that indicate the current state of the discussion, allowing participants to navigate easily and fostering an environment for focused dialogue and knowledge exchange and facilitates the exchange of contact information across research areas and interests.

+ Add new Question Subscribe (Un)Subscribe Users

Based on the domains and topics of the user, the groups that might interest them will be displayed here.

Search Channels

Topics of Discussion - National Accounts	Answered Questions	Questions/Discussions	Last Discussion
Discussions - National Accounts 2008	Answered: 0	Questions: 0	
Discussions - National Accounts 2008	Unanswered: 0	Discussions: 0	
Discussion - National Accounts 2009	Answered: 0	Questions: 0	
Discussion - National Accounts 2009	Unanswered: 0	Discussions: 0	

Most recent questions will be highlighted to help experts more easily find the less experienced users who need help.

Monetary and financial statistics	Last Discussion
Measuring currency in circulation (CIC) outside an economy	
Measuring currency in circulation (CIC) outside an economy	

The users who participate in conversations and answer questions the most will gain additional visibility to encourage this behavior.

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 top navigation bar includes 'Resources', 'Community Forum', 'Project Collaboration' (active), 'My Profile', 'Admin', and 'Edit'. A sidebar on the left contains icons for home, search, documents, and a plus sign. The main content area features a 'PROJECTS' section with a welcome message and a 'Have an idea for a project?' button with a 'Start One' link. To the right, there's a section titled 'Open Calls for collaborators' with a sub-header 'Projects seeking collaborators with your skills...'. Below this, there's a large blue button that says 'Have an idea for a project?' and a 'Start One' link. Further right, there's a section with a photo of a group of people and the text 'AI'. Below the photo, there's a callout box that says 'Users can also start a new project to collaborate with other compilers.' To the right of this, there's another callout box that says 'Institutions can call for participation on their surveys.' Below the 'Have an idea for a project?' button, there's a callout box that says 'New projects that are looking for contributors with relevant skills are featured here.' Below the 'Open Calls for collaborators' section, there's a callout box that says 'Users can collaborate on co-development such as R programming, compilation tools, empirical testing...'. To the right of this, there's another callout box that says 'Users can collaborate on co-authoring new documents, papers, handbooks, guidance notes...'. To the right of that, there's a third callout box that says 'Users can collaborate on collating feedback on a completed project and seek consultation on an ongoing project.' Below this, there's a section titled 'Consultation' with a question mark icon and the text 'Elicit insights, views, contributions, and endorsements on statistical developments.'

Compilers Hub > Collaboration Home

Resources Community Forum **Project Collaboration** My Profile Admin Edit

Private group | IMF and I

PROJECTS

Welcome to a dynamic collaborative environment. This site equips members with relevant skills. In this section, a diverse range of projects are presented, enhancing the collaborative environment.

Have an idea for a project?

Start One

Open Calls for collaborators

Projects seeking collaborators with your skills...

AI

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

Institutions can call for participation on their surveys.

New projects that are looking for contributors with relevant skills are featured here.

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 fields for Title (Alternate Chief), Country (Namia), and Organization (Ministry of Crunching Numbers). Below these are buttons for Domains, Topics, Interests, Skillset, and All. To the right, there is a section for 'User social media info' 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 various features: 'In addition to the institution the user works for, they will also indicate the statistical domains they work in.' points to the Organization field. 'Users can message each other directly on the platform. They can also provide a link to their LinkedIn profiles.' points to the social media info section. 'When their work is cited in other articles, they will appear here.' points to the My Notifications tab. 'Their most recent posts will be listed on their profile page, making it easy to keep track of their contributions.' points to the My Contribution tab. 'Users' profiles will automatically be populated with the content they have authored' points to the My Active Projects section, which currently shows 'There are no projects available.' and '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.

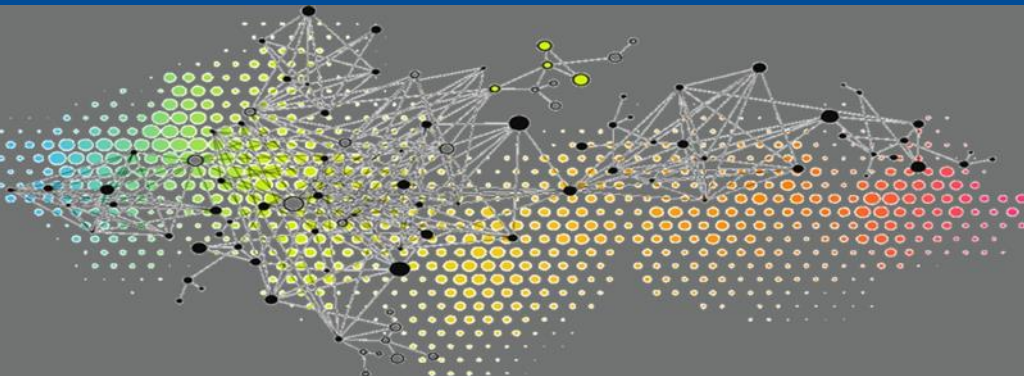
Their most recent posts will be listed on their profile page, making it easy to keep track of their contributions.

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

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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

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

Advertising Output Prices – Quality Adjustment Example

Broadcasting Company Sales and Prices

	Number of ads sold	Sales	Average price per ad sold	# 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

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

PPI/XMPI ONLINE COURSE

PPI/XMPI COURSE IN WASHINGTON
MARCH 2006

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