Update on the Treatment of "Free" Digital Products

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Advisory Expert Group on National Accounts
Virtual Meeting
July 12, 2021

Background

- March 2020
  - Issue paper on data, free assets, and free services

- June 2020
  - GN on recording and valuation of data as an asset
  - Way forward for "free" products

- November 2020: Two GNs for "free" products
  - Clarification of current SNA treatment
  - Proposal for an SNA satellite account

  No changes to SNA central framework

- April 2021: OECD update paper on data as an asset

Intersection of "Free" Products and Data

- Focus on digital platforms and digital apps

- OECD update on recording and measuring data
  - Paper by van de Ven, Zwijnenburg, Mitchell (2021)
  - Distinguishes recording and processing (R&P) costs from OP procurement (OP-P) costs
  - OP-P costs may be either produced or non-produced
  - Access to OPs
    - Exchanged for "free" services
    - Exchanged for explicit payment
    - By-product of production

Guidance Note on Current SNA Treatment

- Draft by Reinsdorf and Ribarsky (2021)

- Digital platforms supply "free" products that facilitate the interaction of two or more parties
  - Subsidized side (e.g., households)
  - Funder side (e.g., advertisers)

- Funder pays markup to cover cost of "free" products
  - Funder side recovers the cost in its sales
  - Subsidized side indirectly pays for use of "free" products

- Consistent treatment for all bundled products

Current Treatment: Baseline

	Household		Intermediary		Advertiser		Total Economy	
Production Account			Uses	Resources	Uses	Resources	Uses	Resources
Output				485		300		785
Predictive ad services				275				275
Software (platform asset)				150				150
Software (database asset)				60				60
Advertised product						300		300
Intermediate consumption			0		275		275	
Predictive ad services					275		275	
Value-added			485		25		510	

	Household		Intermediary		Advertiser		Total Economy	
Use of Income Account	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Disposable income		225		260		25		510
Final consumption expenditure	300		0		0		300	
Advertised product	300						300	
Saving	-75		260		25		210	

	Household		Intermediary		Advertiser		Total Economy	
Capital Account	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Saving		-75		260		25		210
Gross fixed capital formation	0		210		0		210	
Software (platform asset)			150				150	
Software (database asset)			60				60	
Net lending(+)/borrowing(-)	-75		50		25		0	

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Current Treatment: IPPs

		Household		Intermediary		Advertiser		Total Economy	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output				485		300		785
	Predictive ad services				275				275
	Software (platform asset)				150				150
	Software (database asset)				60				60
	Advertised product						300		300
	Intermediate consumption			0		275		275	
	Predictive ad services					275		275	
	Value-added			485		25		510	

		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Use of Income Account	Disposable income		225		260		25		510
	Final consumption expenditure	300		0		0		300	
	Advertised product	300						300	
	Saving	-75		260		25		210	

		Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Capital Account	Saving		-75		260		25		210
	Gross fixed capital formation	0		210		0		210	
	Software (platform asset)			150				150	
	Software (database asset)			60				60	
	Net lending(+)/borrowing(-)	-75		50		25		0	

Current Treatment: Advertising Services

Production Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Output				485		300		785
Predictive ad services				275				275
Software (platform asset)				150				150
Software (database asset)				60				60
Advertised product						300		300
Intermediate consumption			0		275		275	
Predictive ad services					275		275	
Value-added			485		25		510	

Use of Income Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Disposable income		225		260		25		510
Final consumption expenditure	300		0		0		300	
Advertised product	300						300	
Saving	-75		260		25		210	

Capital Account

	Household Assets	Household Liabilities	Intermediary Assets	Intermediary Liabilities	Advertiser Assets	Advertiser Liabilities	Total Economy Assets	Total Economy Liabilities
Saving		-75		260		25		210
Gross fixed capital formation	0		210		0		210	
Software (platform asset)			150				150	
Software (database asset)			60				60	
Net lending(+)/borrowing(-)	-75		50		25		0	

Current Treatment: Advertised Product

Production Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Output				485		300		785
Predictive ad services				275				275
Software (platform asset)				150				150
Software (database asset)				60				60
Advertised product						300		300
Intermediate consumption			0		275		275	
Predictive ad services					275		275	
Value-added			485		25		510	

Use of Income Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Disposable income		225		260		25		510
Final consumption expenditure	300		0		0		300	
Advertised product	300						300	
Saving	-75		260		25		210	

Capital Account

	Household Assets	Household Liabilities	Intermediary Assets	Intermediary Liabilities	Advertiser Assets	Advertiser Liabilities	Total Economy Assets	Total Economy Liabilities
Saving		-75		260		25		210
Gross fixed capital formation	0		210		0		210	
Software (platform asset)			150				150	
Software (database asset)			60				60	
Net lending(+)/borrowing(-)	-75		50		25		0	

SNA Satellite Account

- Effort to make the role of the household more visible

- Intersection of "free" digital products and data is key

- Consistent with OECD (2021)
  - R&P costs for the data asset
  - OP-P costs for the data asset
    - "Free" digital products – GFCF included in sum of costs

SNA Satellite Account

- Definition/scope of "free" digital products
  - Includes digital content that is provided to households without monetary charge for the full value in order to access household observable phenomena that can be transformed into a data asset that can enrich the effectiveness of advertising messages or can be resold or otherwise used in production.
  - Typology in Heys and Taylor (2021)

- Two satellite options
  - Option 1: Household is final consumer (baseline)
  - Option 2: Digital intermediary is intermediate consumer
    - Linkages between "free" digital products and data assets

Satellite Account: Baseline

Production Account

	Household	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Output			485		300		785
Predictive ad services			255				255
"Free" products			20				20
Software (platform asset)			150				150
Software (database asset)			60				60
Advertised product					280		280
"Free" products					20		20
Intermediate consumption		0		275		275	
Predictive ad services				255		255	
"Free" products				20		20	
Value-added		485		25		510	

Use of Income Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Disposable income		225		260		25		510
Final consumption expenditure	300		0		0		300	
Advertised product	280						280	
"Free" products	20						20	
Saving	-75		260		25		210	

Capital Account

	Household Assets	Household Liabilities	Intermediary Assets	Intermediary Liabilities	Advertiser Assets	Advertiser Liabilities	Total Economy Assets	Total Economy Liabilities
Saving		-75		260		25		210
Gross fixed capital formation	0		210		0		210	
Software (platform asset)			150				150	
Software (database asset)			60				60	
Net lending(+)/borrowing(-)	-75		50		25		0	

Satellite Account: Baseline

	Household		Intermediary		Advertiser		Total Economy	
Production Account			Uses	Resources	Uses	Resources	Uses	Resources
Output				485		300		785
Predictive ad services				255				255
"Free" products				20				20
Software (platform asset)				150				150
Software (database asset)				60				60
Advertised product						280		280
"Free" products						20		20
Intermediate consumption			0		275		275	
Predictive ad services					255		255	
"Free" products					20		20	
Value-added			485		25		510	
Use of Income Account	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Disposable income		225		260		25		510
Final consumption expenditure	300		0		0		300	
Advertised product	280						280	
"Free" products	20						20	
Saving	-75		260		25		210	
Capital Account	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Saving		-75		260		25		210
Gross fixed capital formation	0		210		0		210	
Software (platform asset)			150				150	
Software (database asset)			60				60	
Net lending(+)/borrowing(-)	-75		50		25		0	

Satellite Account: Baseline

Production Account

	Household		Intermediary		Advertiser		Total Economy	
	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Output				485		280		765
Predictive ad services				255				255
"Free" products				20				20
Software (platform asset)				150				150
Software (database asset)				60				60
Advertised product						280		280
"Free" products								0
Intermediate consumption			0		255		255	
Predictive ad services					255		255	
"Free" products							0	
Value-added			485		25		510	

Use of Income Account

	Household		Intermediary		Advertiser		Total Economy	
	Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Disposable income		225		260		25		510
Final consumption expenditure	300		0		0		300	
Advertised product	280						280	
"Free" products	20						20	
Saving	-75		260		25		210	

Capital Account

	Household		Intermediary		Advertiser		Total Economy	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Saving		-75		260		25		210
Gross fixed capital formation	0		210		0		210	
Software (platform asset)			150				150	
Software (database asset)			60				60	
Net lending(+)/borrowing(-)	-75		50		25		0	

Satellite Account: Baseline

		Household		Intermediary		Advertiser		Total Economy	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output				485		280		765
	Predictive ad services				255				255
	"Free" products				20				20
	Software (platform asset)				150				150
	Software (database asset)				60				60
	Advertised product						280		280
	"Free" products								0
	Intermediate consumption			0		255		255	
	Predictive ad services					255		255	
	"Free" products							0	
	Value-added			485		25		510	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Use of Income Account	Disposable income		225		260		25		510
	Final consumption expenditure	300		0		0		300	
	Advertised product	280						280	
	"Free" products	20						20	
	Saving	-75		260		25		210	
		Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Capital Account	Saving		-75		260		25		210
	Gross fixed capital formation	0		210		0		210	
	Software (platform asset)			150				150	
	Software (database asset)			60				60	
	Net lending(+)/borrowing(-)	-75		50		25		0	

Satellite Account: Data Asset (R&P)

Production Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Output				500		280		780
Predictive ad services				255				255
"Free" products				20				20
Software (platform asset)				150				150
Software (database asset)				60				60
Software (data asset-R&P)				15				15
Software (data asset-OP-P)								
Advertised product						280		280
Intermediate consumption			0		255		255	
Predictive ad services					255		255	
"Free" products							0	
Value-added			500		25		525	

Secondary Income Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Balance of primary incomes		225		275		25		525
Imputed transfer of OPs								
Disposable income	225		275		25		525	

Use of Income Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Disposable income		225		275		25		525
Final consumption expenditure	300		0		0		300	
Advertised product	280						280	
"Free" products	20						20	
Saving	-75		275		25		225	

Capital Account

	Household Assets	Household Liabilities	Intermediary Assets	Intermediary Liabilities	Advertiser Assets	Advertiser Liabilities	Total Economy Assets	Total Economy Liabilities
Saving		-75		275		25		225
Gross fixed capital formation	0		225		0		225	
Software (platform asset)			150				150	
Software (database asset)			60				60	
Software (data asset-R&P)			15				15	
Software (data asset-OP-P)							0	
Net lending(+)/borrowing(-)	-75		50		25		0	

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Satellite Account: Data Asset (OP-P)

		Household		Intermediary		Advertiser		Total Economy	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Production Account	Output				510		280		790
	Predictive ad services				255				255
	"Free" products				20				20
	Software (platform asset)				150				150
	Software (database asset)				60				60
	Software (data asset-R&P)				15				15
	Software (data asset-OP-P)				10				10
	Advertised product						280		280
	Intermediate consumption			10		255		265	
	Predictive ad services					255		255	
	"Free" products			10				10	
	Value-added			500		25		525	

		Household		Intermediary		Advertiser		Total Economy	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Secondary Income Account	Balance of primary incomes		225		275		25		525
	Imputed transfer of OPs	10		10				10	10
	Disposable income	215		285		25		525	

		Household		Intermediary		Advertiser		Total Economy	
		Uses	Resources	Uses	Resources	Uses	Resources	Uses	Resources
Use of Income Account	Disposable income		215		285		25		525
	Final consumption expenditure	290		0		0		290	
	Advertised product	280						280	
	"Free" products	10						10	
	Saving	-75		285		25		235	

		Household		Intermediary		Advertiser		Total Economy	
		Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Capital Account	Saving		-75		285		25		235
	Gross fixed capital formation	0		235		0		235	
	Software (platform asset)			150				150	
	Software (database asset)			60				60	
	Software (data asset-R&P)			15				15	
	Software (data asset-OP-P)			10				10	
	Net lending(+)/borrowing(-)	-75		50		25		0	

Satellite Account: Data Asset (OP-P)

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Production Account

	Household	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Output			510		280		790
Predictive ad services			255				255
"Free" products			20				20
Software (platform asset)			150				150
Software (database asset)			60				60
Software (data asset-R&P)			15				15
Software (data asset-OP-P)			10				10
Advertised product					280		280
Intermediate consumption		10		255		265	
Predictive ad services				255		255	
"Free" products		10				10	
Value-added		500		25		525	

Secondary Income Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Balance of primary incomes		225		275		25		525
Imputed transfer of OPs	10			10			10	10
Disposable income	215		285		25		525	

Use of Income Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Disposable income		215		285		25		525
Final consumption expenditure	290		0		0		290	
Advertised product	280						280	
"Free" products	10						10	
Saving	-75		285		25		235	

Capital Account

	Household Assets	Household Liabilities	Intermediary Assets	Intermediary Liabilities	Advertiser Assets	Advertiser Liabilities	Total Economy Assets	Total Economy Liabilities
Saving		-75		285		25		235
Gross fixed capital formation	0		235		0		235	
Software (platform asset)			150				150	
Software (database asset)			60				60	
Software (data asset-R&P)			15				15	
Software (data asset-OP-P)			10				10	
Net lending(+)/borrowing(-)	-75		50		25		0	

Satellite Account: Data Asset (OP-P)

Production Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Output				510		280		790
Predictive ad services				255				255
"Free" products				20				20
Software (platform asset)				150				150
Software (database asset)				60				60
Software (data asset-R&P)				15				15
Software (data asset-OP-P)				10				10
Advertised product						280		280
Intermediate consumption			10		255		265	
Predictive ad services					255		255	
"Free" products			10				10	
Value-added			500		25		525	

Secondary Income Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Balance of primary incomes		225		275		25		525
Imputed transfer of OPs	10			10			10	10
Disposable income	215		285		25		525	

Use of Income Account

	Household Uses	Household Resources	Intermediary Uses	Intermediary Resources	Advertiser Uses	Advertiser Resources	Total Economy Uses	Total Economy Resources
Disposable income		215		285		25		525
Final consumption expenditure	290		0		0		290	
Advertised product	280						280	
"Free" products	10						10	
Saving	-75		285		25		235	

Capital Account

	Household Assets	Household Liabilities	Intermediary Assets	Intermediary Liabilities	Advertiser Assets	Advertiser Liabilities	Total Economy Assets	Total Economy Liabilities
Saving		-75		285		25		235
Gross fixed capital formation	0		235		0		235	
Software (platform asset)			150				150	
Software (database asset)			60				60	
Software (data asset-R&P)			15				15	
Software (data asset-OP-P)			10				10	
Net lending(+)/borrowing(-)	-75		50		25		0	

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Satellite Account: Recommend Option 2

- Increased visibility of the household's role
  - Final consumer of some "free" products (but not all)
  - Imputed transfer of OPs for displaced final consumption

- Preserved current SNA scope for sum of costs
  - SOC = labor + capital + intermediate consumption

- Avoided double counting production
  - Output only increases by the value of the data asset
  - Value-added only increases by the value of the R&P costs

- Mitigated imputed transactions

Questions for the AEG

- Do you agree that the production and consumption of "free" digital products of market producers, including platforms, is already covered in the central *SNA* framework and that no change is required, but an explanation should be included in the revised *SNA?*

- Do you agree that a satellite account is the appropriate tool to give visibility to "free" digital products and the flows among sectors and institutional units?

- Do you agree with the proposed definition/scope of "free" digital products for the satellite account?

- Do you support the second option for a satellite account on "free" digital products, which includes costs associated with the production of a data asset?