Update on the Treatment of "Free" Digital Products

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- 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	Inter	mediary	Adv	pertiser	Total	Economy
			Uses	Resources	Uses	Resources	Uses	Resources
	Output			485		300		785
	Predictive ad services			275				275
	Software (platform asset)			150				150
Production	Software (database asset)			60				60
Account	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	Disposable income	225		260		25		510
Income	Final consumption expenditure	300	0		0		300	
Account	Advertised product	300					300	
recount	Saving	-75	260		25		210	
		Assets Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	Saving	-75		260		25		210
Capital	Gross fixed capital formation	0	210		0		210	
Account	Software (platform asset)		150				150	
1 WOuld	Software (database asset)		60				60	
	Net lending(+)/borrowing(-)	-75	50		25		0	

Current Treatment: IPPs



		Household	Inter	mediary	Adv	vertiser	Total	Economy
			Uses	Resources	Uses	Resources	Uses	Resources
	Output			485		300		785
	Predictive ad services			275				275
	Software (platform asset)			150				150
Production	Software (database asset)			60				60
Account	Advertised product					300		300
	Intermediate consumption		0		275		275	
	Predictive ad services				275		275	
	Value-added		485		25		510	
		Uses Resour	ces Uses	Resources	Uses	Resources	Uses	Resources
Use of	Disposable income		225	260		25		510
Income	Final consumption expenditure	300	0		0		300	
Account	Advertised product	300					300	
Account	Saving	-75	260		25		210	
		Assets Liabili	ties Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	Saving		-75	260		25		210
Capital	Gross fixed capital formation	0	210		0		210	
Account	Software (platform asset)		150				150	
	Software (database asset)		60				60	
	Net lending(+)/borrowing(-)	-75	50		25		0	

Current Treatment: Advertising Services



		Household	Intermediary	Advertiser	Total Economy
			Uses Resources	Uses Resources	Uses Resources
	Output		485	300	785
	Predictive ad services		275		275
	Software (platform asset)		150		150
Production	Software (database asset)		60		60
Account	Advertised product			300	300
	Intermediate consumption		0	275	275
	Predictive ad services			275	275
	Value-added		485	25	510
Use of Income Account	Disposable income Final consumption expenditure Advertised product Saving	Uses Resources 300 225 300 -75	UsesResources0260260260	Uses Resources 0 25 25	Uses Resources 300 510 300 210
Capital Account	Saving Gross fixed capital formation Software (platform asset) Software (database asset)	Assets Liabilities -75 0	Assets Liabilities 260 210 150 60	Assets Liabilities 0	Assets Liabilities 210 150 60
	Net lending(+)/borrowing(-)	-75	50	25	0

Current Treatment: Advertised Product



		Household	Intermediary	Advertiser	Total Economy
			Uses Resources	Uses Resources	Uses Resources
	Output		485	300	785
	Predictive ad services		275		275
	Software (platform asset)		150		150
Production	Software (database asset)		60		60
Account	Advertised product			300	300
	Intermediate consumption		0	275	275
	Predictive ad services			275	275
	Value-added		485	25	510
	Disposable income	Uses Resources 225	Uses Resources 260	Uses Resources	Uses Resources 510
Use of	Final consumption expenditure	300	0	0	300
Income	Advertised product	300		Ŭ	300
Account	Saving	-75	260	25	210
		Assets Liabilities	Assets Liabilities	Assets Liabilities	Assets Liabilities
	Saving	-75	260	25	210
Capital Account	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



- Effort to make the role of the household more visible
- Intersection of "free" digital products and data is key
- Options
 - R&P costs for the data asset
 - OP-P costs for the data asset
 - "Free" digital products GFCF included in sum of costs



- Scope of "free" digital products
 - Includes digital content that is provided to households without monetary charge for the full value in exchange for access to 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)
- Household consumption of "free" products
 - Final consumption
 - Intermediate consumption in the production of OPs



		Household	Intermediary	Advertiser	Total Economy
			Uses Resources	Uses Resources	Uses Resources
	Output		485	300	785
	Predictive ad services		250		250
	"Free" products		25		25
	Software (platform asset)		150		150
Production	Software (database asset)		60		60
Account	Advertised product			275	275
Account	"Free" products			25	25
	Intermediate consumption		0	275	275
	Predictive ad services			250	250
	"Free" products			25	25
	Value-added		485	25	510
		Uses Resources	Uses Resources	Uses Resources	Uses Resources
	Disposable income	225	260	25	510
Use of	Final consumption expenditure	300	0	0	300
Income	Advertised product	275			275
Account	"Free" products	25			25
	Saving	-75	260	25	210
		Assets Liabilities	Assets Liabilities	Assets Liabilities	Assets Liabilities
	Saving	-75	260	25	210
Capital	Gross fixed capital formation	0	210	0	210
Account	Software (platform asset)		150		150
Account	Software (database asset)		60		60
	Net lending(+)/borrowing(-)	-75	50	25	0



		Household	Intermediary	Advertiser	u.s. department of commerce <i>Total Economy</i>
			Uses Resources	Uses Resources	Uses Resources
	Output		485	5 300	785
	Predictive ad services		250)	250
	"Free" products		25	5	25
	Software (platform asset)		150)	150
Production	Software (database asset)		60)	60
Account	Advertised product			275	275
Account	"Free" products			25	25
	Intermediate consumption		0	275	275
	Predictive ad services			250	250
	"Free" products			25	25
	Value-added		485	25	510
		Uses Resources	Uses Resources		Uses Resources
II. of	Disposable income	225	260	25	510
Use of	Final consumption expenditure	300	0	0	300
Income	Advertised product	275			275
Account	"Free" products	25			25
	Saving	-75	260	25	210
		Assets Liabilities	Assets Liabilities	s Assets Liabilities	Assets Liabilities
	Saving	-75	260		210
G 1	Gross fixed capital formation	0	210	0	210
Capital	Software (platform asset)	0	150	0	150
Account	Software (database asset)		60		60
	Net lending(+)/borrowing(-)	-75	50	25	0
		,	20		Ĭ



		Household	Intermediary	Advertiser	U.S. DEPARTMENT OF COMMERCE Total Economy
			Uses Resources	Uses Resources	Uses Resources
	Output		485	275	760
	Predictive ad services		250		250
	"Free" products		25		25
	Software (platform asset)		150		150
Production	Software (database asset)		60		60
Account	Advertised product			275	275
Account	"Free" products				0
	Intermediate consumption		0	250	250
	Predictive ad services			250	250
	"Free" products				0
	Value-added		485	25	510
		Uses Resources	Uses Resources	Uses Resources	Uses Resources
_	Disposable income	225	260	25	510
Use of	Final consumption expenditure	300	0	0	300
Income	Advertised product	275			275
Account	"Free" products	25			25
	Saving	-75	260	25	210
		Assets Liabilities	Assets Liabilities	Assets Liabilities	Assets Liabilities
	Saving	-75	260	25	210
Capital	Gross fixed capital formation	0	210	0	210
Account	Software (platform asset)		150		150
Account	Software (database asset)		60		60
	Net lending(+)/borrowing(-)	-75	50	25	0
		-	-	-	



		Household	Intermediary	Advertiser	Total Economy
			Uses Resources	Uses Resources	Uses Resources
	Output		485	275	760
	Predictive ad services		250		250
	"Free" products		25		25
	Software (platform asset)		150		150
Production	Software (database asset)		60		60
Account	Advertised product			275	275
Account	"Free" products				0
	Intermediate consumption		0	250	250
	Predictive ad services			250	250
	"Free" products				0
	Value-added		485	25	510
		Uses Resources	Uses Resources	Uses Resources	Uses Resources
	Disposable income	225	<u>260</u>	25	510
Use of	Final consumption expenditure	300	0	0	300
Income	Advertised product	275		U U	275
Account	"Free" products	25			25
	Saving	-75	260	25	210
		Assets Liabilities	Assets Liabilities	Assets Liabilities	Assets Liabilities
	Saving	-75	260	25	210
Conital	Gross fixed capital formation	0	210	0	210
Capital	Software (platform asset)		150		150
Account	Software (database asset)		60		60
	Net lending(+)/borrowing(-)	-75	50	25	0

Satellite Account: Data Asset (R&P)



		Household	Inter	rmediary	Adv	vertiser	Total	Economy
			Uses	Resources	Uses	Resources	Uses	Resources
	Output			500.0		275.0		775.0
	Predictive ad services			250.0				250.0
	"Free" products			25.0				25.0
	Software (platform asset)			150.0				150.0
	Software (database asset)			60.0				60.0
	Software (data asset-R&P)							
Production	Software (data asset-OP-P)	-						
Account	Provision of OPs							0.0
	Advertised product					275.0		275.0
	Intermediate consumption		0.0		250.0		250.0	
	Predictive ad services				250.0		250.0	
	"Free" products						0.0	
	Provision of OPs						0.0	
	Value-added		500.0		25.0		525.0	
Secondary Income Account	Balance of primary incomes Imputed transfer of OPs Disposable income	Uses Resources 225.0 225.0	Uses	Resources 275.0	Uses 25.0	Resources 25.0	Uses 525.0	Resources 525.0
		Uses Resources	Uses	Resources	Uses	Resources	Uses	Resources
	Disposable income	225.0		275.0		25.0		525.0
Use of	Final consumption expenditure	300.0	0.0		0.0		300.0	
Income	Advertised product	275.0					275.0	
Account	"Free" products	25.0					25.0	
	Saving	-75.0	275.0		25.0		225.0	
		Assets Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	Saving	-75.0		275.0		25.0		225.0
	Gross fixed capital formation	0.0	225.0		0.0		225.0	
Capital	Software (platform asset)		150.0				150.0	
	Software (database asset)		60.0				60.0	
Account	Software (data asset-R&P)		15.0				15.0	
	Software (data asset-OP-P)	-					0.0	
	Net lending(+)/borrowing(-)	-75.0	50.0		25.0		0.0	

Satellite Account: Data Asset (OP-P)



		Household	Intermediary	Advertiser	Total Economy
Production Account	Output Predictive ad services "Free" products Software (platform asset) Software (database asset) Software (data asset-R&P) Software (data asset-OP-P) Provision of OPs Advertised product Intermediate consumption Predictive ad services "Free" products Provision of OPs Value-added		Uses Resources 512.5 250.0 25.0 150.0 15.0 60.0 15.0 12.5 12.5 500.0	Uses Resources 275.0 250.0 250.0 250.0 250.0	Uses Resources 787.5 250.0 25.0 150.0 15.0 60.0 15.0 12.5 250.0 275.0 262.5 250.0 12.5 0.0 525.0 525.0
Secondary Income Account	Balance of primary incomes Imputed transfer of OPs Disposable income	Uses Resources 225.0 12.5 212.5	Uses Resources 275.0 12.5 287.5	Uses Resources 25.0 25.0	Uses Resources 525.0 12.5 12.5 525.0
Use of Income Account	Disposable income Final consumption expenditure Advertised product "Free" products Saving	Uses Resources 212.5 287.5 275.0 12.5 -75.0	Uses Resources 287.5 287.5 287.5	Uses Resources 25.0 25.0 25.0	Uses Resources 525.0 525.0 287.5 275.0 12.5 237.5
Capital Account	Saving Gross fixed capital formation Software (platform asset) Software (database asset) Software (data asset-R&P) Software (data asset-OP-P) Net lending(+)/borrowing(-)	Assets Liabilities -75.0 -75.0	Assets Liabilities 237.5 287.5 150.0 60.0 15.0 15.0 15.0 50.0	Assets Liabilities 25.0 25.0 25.0	Assets Liabilities 237.5 237.5 150.0 60.0 15.0 12.5 0.0 0.0

Satellite Account: Data Asset (OP-P)



		Household	Intermediary	Advertiser	Total Economy
Production Account	Output Predictive ad services "Free" products Software (platform asset) Software (database asset) Software (data asset-R&P) Software (data asset-OP-P) Provision of OPs Advertised product Intermediate consumption Predictive ad services "Free" products Provision of OPs Value-added		Uses Resources 512.5 250.0 25.0 150.0 15.0 60.0 15.0 12.5 12.5 500.0	Uses Resources 275.0 250.0 250.0 250.0 250.0	Uses Resources 787.5 250.0 25.0 25.0 150.0 60.0 15.0 12.5 262.5 250.0 262.5 0.0 255.0 525.0
Secondary Income Account	Balance of primary incomes Imputed transfer of OPs Disposable income	Uses Resources 225.0 12.5 212.5	Uses Resources 275.0 287.5 287.5	Uses Resources 25.0	Uses Resources 525.0 12.5 525.0
Use of Income Account	Disposable income Final consumption expenditure Advertised product "Free" products Saving	Uses Resources 212.5 212.5 287.5 275.0 12.5 -75.0	Uses Resources 287.5 287.5 287.5	Uses Resources 0.0 25.0 25.0 25.0	Uses Resources 525.0 525.0 287.5 275.0 12.5 237.5
Capital Account	Saving Gross fixed capital formation Software (platform asset) Software (database asset) Software (data asset-R&P) Software (data asset-OP-P) Net lending(+)/borrowing(-)	Assets Liabilities -75.0 -75.0	Assets Liabilities 237.5 287.5 150.0 60.0 15.0 15.0 12.5 50.0	Assets Liabilities 25.0 0.0 25.0 25.0	Assets Liabilities 237.5 237.5 150.0 60.0 15.0 12.5 0.0 0

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Satellite Account: Data Asset (OP-P)



		Household	Intermediary	Advertiser	Total Economy
Production Account	OutputPredictive ad services"Free" productsSoftware (platform asset)Software (database asset)Software (data asset-R&P)Software (data asset-OP-P)Provision of OPsAdvertised product	Household	Uses Resources 512.5 250.0 25.0 150.0 60.0 15.0 12.5	<u>Uses Resources</u> 275.0 275.0	Uses Resources 787.5 250.0 25.0 150.0 60.0 15.0 12.5 0.0 275.0
	Intermediate consumption Predictive ad services "Free" products Provision of OPs Value-added	<u>Uses Resources</u>	12.5 12.5 500.0 Uses Resources	250.0 250.0 25.0 Uses Resources	262.5 250.0 12.5 0.0 525.0 Uses Resources
Secondary Income	Balance of primary incomes Imputed transfer of OPs	225.0	275.0 12.5	25.0	525.0 12.5 12.5
Account	Disposable income	212.5	287.5	25.0	525.0
Use of Income Account	Disposable income Final consumption expenditure Advertised product "Free" products Saving	Uses Resources 212.5 287.5 275.0 12.5 -75.0	Uses Resources 0.0 287.5 287.5 287.5	Uses Resources 0.0 25.0 25.0 25.0	Uses Resources 287.5 525.0 275.0 12.5 237.5 237.5
Capital Account	Saving Gross fixed capital formation Software (platform asset) Software (database asset) Software (data asset-R&P) Software (data asset-OP-P) Net lending(+)/borrowing(-)	Assets Liabilities -75.0 -75.0	Assets Liabilities 237.5 287.5 150.0 60.0 15.0 15.0 12.5 50.0	Assets Liabilities 25.0 0.0 25.0	Assets Liabilities 237.5 237.5 150.0 60.0 15.0 15.0 0.0 0.0



- 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



Thank you!

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