

# THE USE OF THE AVERAGE EXCHANGE RATE IN THE CONVERSION OF DOLLARS TO PESOS AND ITS EFFECT ON THE SUT



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# Average ER and its effect on SUT

- When referring to the conversion of data in dollars to the local currency, the recommendation of the SNA 2008 and BPM6 Manuals is to use the midpoint between the buyer and seller rates in order to exclude any cost of the service.
- Suppose that these services are produced by the activity of the foreign trade departments of the banking system and constitutes a commission for the service of buying and selling dollars.
- The aim is to identify the problems using the exchange rate to convert vectors of imports and exports in dollars to the local currency, in the development of the SUT and its logical structure,

# Average ER and service production

- The midpoint between the buyer and seller rates should be used in order to exclude any cost of the service, that is, the difference between the midpoint and the mentioned rates. (SNA 93)
- The average rate between the purchase and sale exchange rates should be used in order to exclude any payment for service. (...) The difference between the purchase and sale prices and the average price represents a service charge and must be recorded as such. (SNA 2008)
- The difference between the buy and sell prices and the midpoint represents the service fee. (BPM6)

# SUT and average exchange rate (AER) the example

- **1.** Agricultural: produces and exports soybeans
- **2.** Manufacturing: produces food for the domestic market and exports
- **3.** Bank: foreign trade section whose income is the commission for the service of buying and selling dollars for exporters and importers
- **4.** There are no trade and transport margins;  $CIF = FOB$ ; there is no  $CIF / FOB$  adjustment;
- **5.** No taxes on products

# SUT and average exchange rate the example

- seller - MER 80                  buyer - XER 70
- Average ER =  $1/2 (80 + 70) = 75$
- financial service price:  $1/2 (MER - XER) = 1/2 (80 - 70) = 5$
- agency production sold to the exporter:  $450,000 \times 5 = 2,250,000$
- agency production sold to the importer:  $500,000 \times 5 = 2,500,000$
- AGENCY TOTAL PRODUCTION =  $4,750,000 = 950,000 \times 5$

# SUT and average exchange rate the example

		X_M en U\$\$	TC prom.	X_M en \$	
M	materias primas	400.000	75,0	30.000.000	M
M	bien de capital	100.000	75,0	7.500.000	M
X	soja	400.000	75,0	30.000.000	X
X	alimentos	50.000	75,0	3.750.000	X
		<b>950.000</b>	<b>75,0</b>	<b>71.250.000</b>	
1	Saldo comercial			- <b>3.750.000</b>	

		X_M en U\$\$	TCX /TCM	X_M en \$		DIFERENCIA DE CAMBIO	
M	materias primas	400.000	80,0	32.000.000	M	2.000.000	2.000.000
M	bien de capital	100.000	80,0	8.000.000	M	500.000	500.000
X	soja	400.000	70,0	28.000.000	X	2.000.000 -	2.000.000
X	alimentos	50.000	70,0	3.500.000	X	250.000 -	250.000
		<b>950.000</b>	<b>75,26</b>	<b>71.500.000</b>		<b>4.750.000</b>	<b>250.000</b>
2	Saldo comercial			- <b>8.500.000</b>		<b>5,00</b>	<b>0,26</b>
1 - 2	<b>Produccion de servicios</b>			<b>4.750.000</b>			

# IMPORTS and EXPORTS with XER and MER

## CUADRO DE OFERTA Y UTILIZACION

CASO 1 TCX / TCM

CPC	OFERTA
MAT PRIM	32.000.000
BIEN DE CAPITAL	8.000.000
ALIMENTOS	100.000.000
SOJA	28.000.000
SERV FIN	-
<b>TOTAL</b>	<b>168.000.000</b>

MARGENES E IMPUESTOS			VALOR DE PRODUCCION			RM
COMERCIO	TRANSPORTE	IMPUESTOS	AGRO	INDUSTRIA	BANCO	IMPORTACIONES
						32.000.000
						8.000.000
				100.000.000		
			28.000.000			
0	0		28.000.000	100.000.000	-	40.000.000
						128.000.000

	OFERTA
MAT PRIM	32.000.000
BIEN DE CAPITAL	8.000.000
ALIMENTOS	100.000.000
SOJA	28.000.000
SERV FIN	-
<b>TOTAL</b>	<b>168.000.000</b>

CONSUMO INTERMEDIO			EXPORTACIONES	CONSUMO	FBC	EQUILIBRIO O-U
	32.000.000					-
					8.000.000	-
			3.500.000	96.500.000		-
			28.000.000			-
						-
-	32.000.000	-	31.500.000	96.500.000	8.000.000	-
			32.000.000			136.000.000

VALOR AGREGADO BRUTO

28.000.000 68.000.000 - 96.000.000

IMPUESTOS A LOS PRODUCTOS

-

PRODUCTO INTERNO BRUTO

96.000.000

96.000.000 = DF - M

# M and X with average exchange rate

- The use of the average exchange rate opens imbalances
- With an average exchange rate of 75 (lower than MER 80 and greater than XER 70), excess demand is generated per CCP
- In the financial services CCP, an excess supply is generated due to the exchange difference



# Imports and Exports with AER and imbalances

## CUADRO DE OFERTA Y UTILIZACION

CASO2	TCP	con desequilibrios
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CPC	OFERTA
MAT PRIM	30.000.000
BIEN DE CAPITAL	7.500.000
ALIMENTOS	100.000.000
SOJA	28.000.000
SERV FIN	4.750.000
<b>TOTAL</b>	<b>170.250.000</b>

MARGENES E IMPUESTOS			VALOR DE PRODUCCION			RM
COMERCIO	TRANSPORTE	IMPUESTOS	AGRO	INDUSTRIA	BANCO	IMPORTACIONES
						30.000.000
						7.500.000
				100.000.000		
			28.000.000			
					4.750.000	
0	0		<b>28.000.000</b>	<b>100.000.000</b>	<b>4.750.000</b>	<b>132.750.000</b>
						<b>37.500.000</b>

	OFERTA
MAT PRIM	30.000.000
BIEN DE CAPITAL	7.500.000
ALIMENTOS	100.000.000
SOJA	28.000.000
SERV FIN	4.750.000
<b>TOTAL</b>	<b>170.250.000</b>

CONSUMO INTERMEDIO			EXPORTACIONES	CONSUMO	FBC	EQUILIBRIO O-U
	<b>32.000.000</b>					-2.000.000
					<b>8.000.000</b>	-500.000
			3.750.000	96.500.000		-250.000
			30.000.000			-2.000.000
						4.750.000
-	<b>32.000.000</b>	-	<b>32.000.000</b>	<b>33.750.000</b>	<b>96.500.000</b>	<b>8.000.000</b>
						<b>138.250.000</b>
						-

# New setting vector

## CUADRO DE OFERTA Y UTILIZACION

CASO 2.1 TCP con desequilibrios

CPC	OFERTA	SERVICIO FINANCIERO	MARGENES E IMPUESTOS			VALOR DE PRODUCCION			RM	
			COMERCIO	TRANSPORTE	IMPUESTOS	AGRO	INDUSTRIA	BANCO		
MAT PRIM	30.000.000								IMPORTACIONES 30.000.000	
BIEN DE CAPITAL	7.500.000								7.500.000	
ALIMENTOS	100.000.000						100.000.000			
SOJA	28.000.000					28.000.000				
SERV FIN	4.750.000							4.750.000		
<b>TOTAL</b>	<b>170.250.000</b>		0	0		<b>28.000.000</b>	<b>100.000.000</b>	<b>4.750.000</b>	<b>132.750.000</b>	<b>37.500.000</b>

	OFERTA
MAT PRIM	30.000.000
BIEN DE CAPITAL	7.500.000
ALIMENTOS	100.000.000
SOJA	28.000.000
SERV FIN	4.750.000
<b>TOTAL</b>	<b>170.250.000</b>

CONSUMO INTERMEDIO			EXPORTACIONES	CONSUMO	FBC	EQUILIBRIO O-U
	32.000.000					-2.000.000
					8.000.000	-500.000
			3.750.000	96.500.000		-250.000
			30.000.000			-2.000.000
						4.750.000
<b>TOTAL</b>	<b>32.000.000</b>	<b>-</b>	<b>33.750.000</b>	<b>96.500.000</b>	<b>8.000.000</b>	<b>-</b>

VALOR AGREGADO BRUTO 28.000.000 68.000.000 4.750.000 100.750.000

IMPUESTOS A LOS PRODUCTOS -

PRODUCTO INTERNO BRUTO 100.750.000

100.750.000 = DF - M



# Service output adjustment

## CUADRO DE OFERTA Y UTILIZACION

CASO 2.3 TCP con desequilibrios

CPC	OFERTA	SERVICIO FINANCIERO	MARGENES E IMPUESTOS			VALOR DE PRODUCCION			RM
			COMERCIO	TRANSPORTE	IMPUESTOS	AGRO	INDUSTRIA	BANCO	
MAT PRIM	32.000.000	2.000.000							30.000.000
BIEN DE CAPITAL	8.000.000	500.000							7.500.000
ALIMENTOS	100.000.000						100.000.000		
SOJA	28.000.000					28.000.000			
SERV FIN	2.250.000	-2.500.000						4.750.000	
<b>TOTAL</b>	<b>170.250.000</b>	-	0	0		<b>28.000.000</b>	<b>100.000.000</b>	<b>4.750.000</b>	<b>132.750.000</b>

	OFERTA	CONSUMO INTERMEDIO			EXPORTACIONES	CONSUMO	FBC		EQUILIBRIO O-U
MAT PRIM	32.000.000		32.000.000					-	-
BIEN DE CAPITAL	8.000.000						8.000.000		-
ALIMENTOS	100.000.000				3.750.000	96.500.000			-250.000
SOJA	28.000.000				30.000.000				-2.000.000
SERV FIN	2.250.000							-	2.250.000
<b>TOTAL</b>	<b>170.250.000</b>		<b>32.000.000</b>		<b>33.750.000</b>	<b>96.500.000</b>	<b>8.000.000</b>	<b>138.250.000</b>	<b>-</b>

VALOR AGREGADO BRUTO	28.000.000	68.000.000	4.750.000	100.750.000
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IMPUESTOS A LOS PRODUCTOS				
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PRODUCTO INTERNO BRUTO	100.750.000
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100.750.000 = DF - M



# Full adjustment

- The production of services of 4,750.00 at basic prices, becomes 2,250,000 at buyer prices, which is a cost of the exporting sectors (agriculture 2,000,000 and manufacturing 250,000)
- The production of services by the selling ER (2,500,000), is assigned to the imported CCPs, which allows them to be equal to the expense at buyer prices.
- Exports increases because they are valued at the average exchange rate that is higher than the export exchange rate
- The production values of agriculture and manufacturing increase by the same amount as exports. At the same time intermediate consumption of both industries increases because the difference AER - XER is now an explicit cost for exporters

# Full adjustment

## CUADRO DE OFERTA Y UTILIZACION

CASO 3	TCP	equilibrado
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CPC	OFERTA	SERVICIO FINANCIERO	MARGENES E IMPUESTOS			VALOR DE PRODUCCION			RM
			COMERCIO	TRANSPORTE	IMPUESTOS	AGRO	INDUSTRIA	BANCO	
MAT PRIM	32.000.000	2.000.000							30.000.000
BIEN DE CAPITAL	8.000.000	500.000							7.500.000
ALIMENTOS	100.250.000						100.250.000		
SOJA	30.000.000					30.000.000			
SERV FIN	2.250.000	-2.500.000						4.750.000	
<b>TOTAL</b>	<b>172.500.000</b>	0	0	0		<b>30.000.000</b>	<b>100.250.000</b>	<b>4.750.000</b>	<b>37.500.000</b>

	OFERTA
MAT PRIM	32.000.000
BIEN DE CAPITAL	8.000.000
ALIMENTOS	100.250.000
SOJA	30.000.000
SERV FIN	2.250.000
<b>TOTAL</b>	<b>172.500.000</b>

CONSUMO INTERMEDIO				EXPORTACIONES	CONSUMO	FBC	EQUILIBRIO-U
	<b>32.000.000</b>						-
						<b>8.000.000</b>	-
				3.750.000	96.500.000		-
				30.000.000			-
	<b>2.000.000</b>	<b>250.000</b>					-
	<b>2.000.000</b>	<b>32.250.000</b>	-	<b>34.250.000</b>	<b>33.750.000</b>	<b>96.500.000</b>	<b>8.000.000</b>
							<b>138.250.000</b>

VALOR AGREGADO BRUTO

28.000.000 68.000.000 4.750.000 100.750.000

IMPUESTOS A LOS PRODUCTOS

100.750.000

PRODUCTO INTERNO BRUTO

100.750.000 = DF - M

# Conclusions

- This problem of the average exchange rate in SUT, as has been raised here, is not discussed in Chapter 14 of the 2008 SNA Manual on the development of the SUT. What we have tried to emphasize here is that it requires proper design adjustments in the SUT, in order to achieve balances supply and use. Note that the problem of applying the average ER affects almost all balances to be achieved.
- How to link the private accounting record with the needs of national accounting? This problem extends to all exporting companies and to the import of inputs and final goods valued at the import exchange rate. For example, in Argentina, the price available to calculate the GVP of cereals and oilseeds is the FAS price in pesos at the export ER (net of withholdings).



# Conclusions

- Where is the service provided and who is the producer? Is it the foreign trade department of the banks, exclusively? Are there operations outside the financial sector? How to estimate the production of these financial services? Is it enough to compute the differences with the midpoint of the exchange rates, buyer and seller, as payment for services?
- Finally, if it were decided to value imports by CCP, directly FOB value, instead of CIF, not only you would still need the CIF / FOB adjustment but also an adjustment of the kind we here analyzed to allow the imports by CCP be valued at buyer prices, as a requirement to achieve SUT equilibria



Thank you

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