How fisheries can support a small island economy in pandemic times. The Seychelles case.

Supplementary materials.

A1. The SAM theoretical framework

Suppose a matrix with only two sets of sectors (e.g. 1=’Blue economy’ and 2=‘Others’) and one homogeneous type of households, receiving capital and labor incomes from both sets of industries. We provide in the following sub-sections the matrix formulas used for estimating SAM multipliers for both constrained and unconstrained models.

1.1. Multiplier model with exogenous final demand and unconstrained supply

In this sub-section we introduce the simplest model where final uses are exogenous (except households’ consumption) and stimulate the whole producing economy (Table 1). The model relies on a few simple assumptions. Firstly, prices are assumed to be fixed, i.e. the adjustment after a demand variation must be made on output quantities rather than prices. Secondly, the adjustments in production volume are unlimited in the unconstrained model, meaning that there is no limited capacity of production. Thirdly, there is no variation neither in consumer’s nor in producer’s behavior following the demand variation. The production and consumption linkages are therefore stable whatever the change in demand.

Table 1: Social Accounting Matrix in monetary flows.

								Final uses				Total
		Activities		Commodities		Factors		House-holds	Gov.	Saving/ Invest.	RoW	
		A_1	A_2	C_1	C_2	K	L	H	G	I	E	
Activities	A_1			X_1								X_1
	A_2				X_2							X_2
Commodities	C_1	Z_{11}	Z_{12}					C_1	G_1	I_1	E_1	Z_1
	C_2	Z_{21}	Z_{22}					C_2	G_2	I_2	E_2	Z_2
Factors	K	V_{K1}	V_{K2}									V_K
	L	V_{L1}	V_{L2}									V_L
Final Users	H					V_K	V_L		R		W_H	Y
	G			T_1	T_2			Θ			W_G	G
	I							S_H	I_G		W_I	I
	E			M_1	M_2							E
Total		X_1	X_2	Z_1	Z_2	V_K	V_L	Y	G	I	E	

In Table 1, X_j represents the total gross output of activities included in sectors 1 (=’Blue economy’) and 2 (=’Others’); Z_j is the total supply (or demand in rows) of commodities 1 and 2, summing up the domestic outputs at basic prices, the indirect taxes on products (T_j) and imports (M_j). V_K and V_L are the Capital and Labour primary incomes, respectively (also called Gross Value Added GVA). Y denotes the households’ income. The primary income of capital and labour is paid to households and is accrued to the social transfers received from the government (R) and to the net remittances received from (or paid to) the rest of the world (W_H). This income is spent by consuming commodities *i* (C_i), paying direct income taxes to the government (Θ), and saving for a certain part of it (S_H). The government budget is formed by the indirect (including import tariffs) and direct taxes (T_i + Θ), and consumed in commodities *i* (G_i), paying social transfers to the poorest families (*R*), investing in facilities, public companies, education or defence (I_G), and finally lending (borrowing) monetary funds (grants or loans) to (from) the *RoW*. *I* represents private investments in commodities *i* and E_i the export demand from the *RoW* which also transfer money from and to the domestic economy through the net remittances from expatriate workers, foreign direct and portfolio investment, foreign aids, loans and grants, etc.

The red-shaded columns and rows in Table 1 represent the exogenous demand. In this example, only the final consumption of households (H) is endogenous in the model, meaning that there will be a Keynesian (consumption) multiplier added to the Leontief (output) multiplier stimulated by the external (or exogenous) shocks of expenditure from the government, the private investment and exports. In the following Table 2, all the terms included in the cells other than the exogenous final uses are then divided by the sum in columns to obtain a matrix with ratios (or share coefficients) (Table 2). The sum of all columns but exogenous demand *F (=G+I+E)* is therefore equal to one.

Table 2: Social Accounting Matrix in ratios

		Activities		Commodities		Factors		House-holds	Gov.	Saving/ Invest.	RoW	Total
		A_1	A_2	C_1	C_2	K	L	H	G	I	E	
Activities	A_1			$b_1 = X_1/Z_1$								X_1
	A_2				$b_2 = X_2/Z_2$							X_2
Commodities	C_1	$a_{11}=Z_{11}/X_1$	$a_{12}=Z_{12}/X_2$					$c_1 = C_1/Y$	G_1	I_1	E_1	Z_1
	C_2	$a_{21}=Z_{21}/X_1$	$a_{22}=Z_{22}/X_2$					$c_2 = C_2/Y$	G_2	I_2	E_2	Z_2
Factors	K	$v_{K1}=V_{K1}/X_1$	$v_{K2}=V_{K2}/X_2$									V_K
	L	$v_{L1}=V_{L1}/X_1$	$v_{L2}=V_{L2}/X_2$									V_L
Final Users	H					1	1		R		W_H	Y
	G			$t_1 = T_1/Z_1$	$t_2 = T_2/Z_2$			$\theta=\Theta/Y$			W_G	G
	I							$s_H=S_H/Y$	I_G		W_I	I
	E			$m_1 = M_1/Z_1$	$m_2 = M_2/Z_2$							E
	Total	1	1	1	1	1	1	1	G	I	E	

New symbols are introduced to express the coefficients: for instance, *b* is the domestic gross output share in the total demand of the two sets of commodities; a_{ij} is the share of commodity *i* as intermediate input consumed by domestic industry *j* to produce its output X_j, this ratio being commonly called technical coefficient in Input-Output tables. The coefficients v_K and v_L are respectively the income shares of capital and labor (added value) in the output value of each industry; *m* is the imported commodity share in the total demand of commodity *j*. In the final demand columns, c_i denotes the households' consumption as percent share of their total income. s_H is the household saving share in total income *Y*.

We use the symbols of Tables 1 and 2 to express the equations representing the total supply of every commodity on the left-hand side (Z_i) and total demand on the right-hand side as the sum of the intermediate uses by the domestic industries, household final consumption and other (exogenous) final uses (*F=G+I+E*). The row-wise reading of the SAM is therefore:

$$\begin{cases} Z_1 = a_{11}X_1 + a_{12}X_2 + c_1Y + F_1 \\ Z_2 = a_{21}X_1 + a_{12}X_2 + c_2Y + F_2 \end{cases} \qquad \text{(Eq. 1)}$$

The gross domestic output can only meet part of the total demand, with a column-wise reading:

$$\begin{cases} X_1 = b_1 Z_1 \\ X_2 = b_2 Z_2 \end{cases} \quad \text{(Eq. 2)}$$

The households' income (Y) is composed by the capital and labor incomes:

$$\begin{cases} Y = (w_{K1} + w_{L1})X_1 + (w_{K2} + w_{L2})X_2 \\ Y = w_1 X_1 + w_2 X_2 \end{cases} \quad \text{(Eq. 3)}$$

With $w_j = w_{Kj} + w_{Lj}$ to simplify the notations.

In this case, households' income and GDP will be identical because the Government expenditure is exogenous in the model and there are no social transfers nor factor taxes in this view, all value-added being paid to households who will then fully consume or save it. We put the gross output definition (Eq. 2) into the income equation (Eq. 3):

$$Y = w_1 b_1 Z_1 + w_2 b_2 Z_2 \quad \text{(Eq. 4)}$$

Afterwards we can place the output and income equation (Eq. 2) and (Eq. 4) into the demand equation (Eq. 1):

$$\begin{cases} Z_1 = a_{11} b_1 Z_1 + a_{12} b_2 Z_2 + c_1(w_1 b_1 Z_1 + w_2 b_2 Z_2) + F_1 \\ Z_2 = a_{21} b_1 Z_1 + a_{22} b_2 Z_2 + c_1(w_1 b_1 Z_1 + w_2 b_2 Z_2) + F_2 \end{cases} \quad \text{(Eq. 5)}$$

We adjust the equation by moving all the endogenous terms on the left-hand side:

$$\begin{cases} Z_1 - a_{11} b_1 Z_1 - a_{12} b_2 Z_2 - c_1(w_1 b_1 Z_1 + w_2 b_2 Z_2) = F_1 \\ Z_2 - a_{21} b_1 Z_1 - a_{22} b_2 Z_2 - c_2(w_1 b_1 Z_1 + w_2 b_2 Z_2) = F_2 \end{cases} \quad \text{(Eq. 6)}$$

We then factorize the total demand terms (*Z*):

$$\begin{cases} (1 - a_{11} b_1 - c_1 w_1 b_1) Z_1 + (-a_{12} b_2 - c_1 w_2 b_2) Z_2 = F_1 \\ (-a_{21} b_1 - c_2 w_1 b_1) Z_1 + (1 - a_{22} b_2 - c_2 w_2 b_2) Z_2 = F_2 \end{cases} \quad \text{(Eq. 7)}$$

We rewrite the equation using a matrix format:

$$\begin{pmatrix} 1 - a_{11} b_1 - c_1 w_1 b_1 & -a_{12} b_2 - c_1 w_2 b_2 \\ -a_{21} b_1 - c_2 w_1 b_1 & 1 - a_{22} b_2 - c_2 w_2 b_2 \end{pmatrix} \begin{pmatrix} Z_1 \\ Z_2 \end{pmatrix} = \begin{pmatrix} F_1 \\ F_2 \end{pmatrix} \quad \text{(Eq. 8)}$$

At this point, we can identify the identity equation minus the coefficient matrix (I-M):

$$\begin{pmatrix} 1 - a_{11} b_1 - c_1 w_1 b_1 & -a_{12} b_2 - c_1 w_2 b_2 \\ -a_{21} b_1 - c_2 w_1 b_1 & 1 - a_{22} b_2 - c_2 w_2 b_2 \end{pmatrix} = (I - M) \quad \text{(Eq. 9)}$$

$$(I - M)Z = F \quad \text{(Eq. 10)}$$

Finally, we rearrange the terms to obtain the final multiplier matrix:

$$Z = (I - M)^{-1} F \quad \text{(Eq. 11)}$$

The sums in columns of the $(I-M)^{-1}$matrix represent multipliers of the exogenous final use terms to the whole amount of supply or demand in the economy. They capture the direct, indirect and induced effects of a particular change of final demand to the whole economy. Let's take the example of an external increase of demand for processed fish from the rest of world. The increase in fish product exports will first increase the domestic production of this industry which will purchase new intermediate inputs to meet this additional demand. This will stimulate the production of all other industries supplying these inputs (direct effects of production linkages) which in turn will purchase their own inputs from other national or foreign industries (indirect effects of production linkages + leakages to the RoW). By creating jobs and distributing capital and labour income, the activities will be further receiving extra-consumption from final users (induced effects of consumption linkages).
In this first approach, the taxes and imports can be considered as leakages out of the circular flow of the economy because the government and foreign companies are external to the system. However, in the next sub-section, we can include the government into the system which will invest in the blue economy and purchase commodities thanks to the additional revenue received from income tax and indirect taxes on products, including tariffs on imports. The gross capital formation demand from the domestic private sector can also be endogenized, transforming the national savings into investment for the economic development of Seychelles.

1.1.1 The case where the rest of world is the only exogenous final use sector

Suppose now that the private investment and public expenditure are endogenized, leaving the sole export sector as external component to the system (Table 3). Income and GDP will now be different, and the multipliers become slightly more complex to estimate.

Table 3: SAM with the RoW as sole external sector

		Activities		Commodities		Factors		House-holds	Gov.	Saving/ Invest.	RoW	Total
		A_1	A_2	C_1	C_2	K	L	H	G	I	E	
Activities	A_1			$b_1 = X_1/Z_1$								X_1
	A_2				$b_2 = X_2/Z_2$							X_2
Commodities	C_1	$a_{11}=Z_{11}/X_1$	$a_{12}=Z_{12}/X_2$					$c_1 = C_1/Y$	$g_1 = G_1/G$	$i_1 = I_1/I$	E_1	Z_1
	C_2	$a_{21}=Z_{21}/X_1$	$a_{22}=Z_{22}/X_2$					$c_2 = C_2/Y$	$g_2 = G_2/G$	$i_2 = I_2/I$	E_2	Z_2
Factors	K	$v_{K1}=V_{K1}/X_1$	$v_{K2}=V_{K2}/X_2$									V_K
	L	$v_{L1}=V_{L1}/X_1$	$v_{L2}=V_{L2}/X_2$									V_L
Final Users	H					1	1		$r=R/G$		W_H	Y
	G			$t_1 = T_1/Z_1$	$t_2 = T_2/Z_2$			$\theta=\Theta/Y$			W_G	G
	I							$s_H=S_H/Y$	$i_G=I_G/G$		W_I	I
	E			$m_1 = M_1/Z_1$	$m_2 = M_2/Z_2$							E
	Total	1	1	1	1	1	1	1	1	1	E	

In this framework, Eq. (1) now becomes:

$$\begin{cases} Z_1 = a_{11}X_1 + a_{12}X_2 + c_1Y + g_1G + +i_1I + E_1 \\ Z_2 = a_{21}X_1 + a_{12}X_2 + c_2Y + g_2G + +i_2I + E_2 \end{cases} \quad \text{(Eq. 1')}$$

The households' income (*Y*) now includes the social transfer paid by the government in addition to the factors' primary income received from the activities (e.g. wages and royalties).

$$\begin{cases} Y = (w_{K1} + w_{L1})X_1 + (w_{K2} + w_{L2})X_2 + rG \\ Y = w_1X_1 + w_2X_2 + rG \end{cases} \quad \text{(Eq. 3')}$$

Where *G* is the government income and *r* the share of the budget allocated to social transfers. The government's budget is paid by direct (income) taxes (θY) and indirect taxes ($t_1$and t_2) on products:

$$G = t_1 Z_1 + t_2 Z_2 + \theta Y \qquad \text{(Eq. 2')}$$

We can then modify Eq. (3') to place the Government's income (Eq. 2') and Output (Eq. 2) equations:

$$\begin{cases} Y = w_1 b_1 Z_1 + w_2 b_2 Z_2 + r.(t_1 Z_1 + t_2 Z_2 + \theta Y) \\ Y = \frac{(w_1 b_1 + r.t_1)}{(1 - r\theta)} Z_1 + \frac{(w_2 b_2 + r.t_2)}{(1 - r\theta)} Z_2 \\ Y = k_1 Z_1 + k_2 Z_2 \end{cases} \qquad \text{(Eq. 3'')}$$

Where $k_1 = \frac{(w_1 b_1 + r.t_1)}{(1 - r\theta)}$ and $k_2 = \frac{(w_2 b_2 + r.t_2)}{(1 - r\theta)}$

The present model assumes that all savings and fiscal surplus are used for private investment:

$$\begin{cases} I = S_H + I_G = s_H Y + i_G G \\ I = s_H(k_1 Z_1 + k_2 Z_2) + i_G[t_1 Z_1 + t_2 Z_2 + \theta(k_1 Z_1 + k_2 Z_2)] \\ I = (s_H k_1 + i_G t_1 + \theta k_1) Z_1 + (s_H k_2 + i_G t_2 + \theta k_2) Z_2 \\ I = \alpha_1 Z_1 + \alpha_2 Z_2 \end{cases} \qquad \text{(Eq. 4')}$$

Where $\alpha_1 = s_H k_1 + i_G t_1 + \theta k_1$and $\alpha_2 = s_H k_2 + i_G t_2 + \theta k_2$

We have now all elements to place the various components into Eq. (1'):

$$\begin{cases} Z_1 = a_{11} b_1 Z_1 + a_{12} b_2 Z_2 + c_1(k_1 Z_1 + k_2 Z_2) + g_1[t_1 Z_1 + t_2 Z_2 + \theta(k_1 Z_1 + k_2 Z_2)] + i_1(\alpha_1 Z_1 + \alpha_2 Z_2) + E_1 \\ Z_2 = a_{21} b_1 Z_1 + a_{12} b_2 Z_2 + c_2(k_1 Z_1 + k_2 Z_2) + g_2[t_1 Z_1 + t_2 Z_2 + \theta(k_1 Z_1 + k_2 Z_2)] + i_2(\alpha_1 Z_1 + \alpha_2 Z_2) + E_2 \end{cases}$$

(5')

We adjust the equation by moving all the endogenous terms on the left-hand side and factorizing as for Eq. (6) and (7):

$$\begin{cases} (1 - a_{11} b_1 - c_1 k_1 - g_1 t_1 - g_1 \theta k_1 - i_1 \alpha_1) Z_1 + (-a_{12} b_2 - c_1 k_2 - g_1 t_2 - g_1 \theta k_2 - i_1 \alpha_2) Z_2 = E_1 \\ (-a_{21} b_1 - c_2 k_1 - g_2 t_1 - g_2 \theta k_1 - i_2 \alpha_1) Z_1 + (1 - a_{12} b_2 - c_2 k_2 - g_2 t_2 - g_2 \theta k_2 - i_2 \alpha_2) Z_2 = E_2 \end{cases}$$

(6')

We can rewrite eq. (6') using a matrix format:

$$\begin{pmatrix} 1 - a_{11} b_1 - c_1 k_1 - g_1 t_1 - g_1 \theta k_1 - i_1 \alpha_1 & -a_{12} b_2 - c_1 k_2 - g_1 t_2 - g_1 \theta k_2 - i_1 \alpha_2 \\ -a_{21} b_1 - c_2 k_1 - g_2 t_1 - g_2 \theta k_1 - i_2 \alpha_1 & 1 - a_{12} b_2 - c_2 k_2 - g_2 t_2 - g_2 \theta k_2 - i_2 \alpha_2 \end{pmatrix} \begin{pmatrix} Z_1 \\ Z_2 \end{pmatrix} = \begin{pmatrix} E_1 \\ E_2 \end{pmatrix}$$

(Eq. 7')

At this point, we can identify the identity equation minus the coefficient matrix (I-M):

$$\begin{pmatrix} 1 - a_{11} b_1 - c_1 k_1 - g_1 t_1 - g_1 \theta k_1 - i_1 \alpha_1 & -a_{12} b_2 - c_1 k_2 - g_1 t_2 - g_1 \theta k_2 - i_1 \alpha_2 \\ -a_{21} b_1 - c_2 k_1 - g_2 t_1 - g_2 \theta k_1 - i_2 \alpha_1 & 1 - a_{12} b_2 - c_2 k_2 - g_2 t_2 - g_2 \theta k_2 - i_2 \alpha_2 \end{pmatrix} = (I - M')$$

(Eq. 8')

Then the same model as Eq. (11) previously can be re-written:

$$Z = (I - M')^{-1}E \qquad \text{(Eq. 11')}$$

The multiplier effects are now much more complex because they include multiple interactions between coefficients of different kinds (propensity to consume the income, tax rates, budget share of social transfers...).

1.2. Multiplier model with constrained supply

In this subsection, we are coming back to the simple case where all final uses but households' consumption are exogenous, but we now consider that at least one sector is unable to respond to the demand shock. It can be easily explained by the limitation of scarce resources or factors; their reallocation takes time during which the supply is unable to meet an extra volume of demand. The constrained multipliers are therefore found smaller than the unconstrained multipliers. This type of model can be referred to as a mixed (or semi-input) model in the Input-Output literature (Miller and Blair 2009, p. 621).

We make a distinction between the two sets of sectors: let Z_2 be supply-constrained. The output of the sector is now fixed and the imports substitute for its production. By doing this, the formerly endogenous supply (Z_2) is now treated as exogenous, and the formerly exogenous final demand of Sector 2 (F_2) is now treated as endogenous. If the exogenous final uses were restricted to the mere relationship with the RoW (E_2), net exports (exports minus imports) could now change to absorb the external shock.

We now replace the new exogenous components (Z_1) on the right-hand side of Equation (7):

$$\begin{cases} (1 - a_{11}b_1 - c_1w_1b_1)Z_1 = F_1 - (-a_{12}b_2 - c_1w_2b_2)Z_2 \\ (-a_{21}b_1 - c_2w_1b_1)Z_1 - F_2 = -(1 - a_{22}b_2 - c_2w_2b_2)Z_2 \end{cases} \qquad \text{(Eq. 12)}$$

To make the following adjustment, we need the same equation with a sign modification:

$$\begin{cases} (1 - a_{11}b_1 - c_1w_1b_1)Z_1 = F_1 + (a_{12}b_2 + c_1w_2b_2)Z_2 \\ (-a_{21}b_1 - c_2w_1b_1)Z_1 - F_2 = (-1 + a_{22}b_2 + c_2w_2b_2)Z_2 \end{cases} \qquad \text{(Eq. 13)}$$

We can observe a new adjusted coefficient matrix (I-M*) which is a bit different from the (I-M) matrix. Actually, the second matrix column is refined from its coefficients. It means that sector 2, now treated as exogenous, will see its net exports decreasing during the process:

$$\begin{pmatrix} 1 - a_{11}b_1 - c_1w_1b_1 & 0 \\ -a_{21}b_1 - c_2w_1b_1 & -1 \end{pmatrix} = (I - M^*)$$

The first term on the right-hand side of Eq. (13) is a new term that can be abbreviated as *B*. If none of the sectors is constrained, *B* will be an identity matrix, showing no economic impact after a shock. Sector 2 being constrained, the second column of *B* will affect the industrial linkage effects.

$$\begin{pmatrix} 1 & a_{12}b_2 + c_1w_2b_2 \\ 0 & -1 + a_{22}b_2 + c_2w_2b_2 \end{pmatrix} = B \qquad \text{(Eq. 14)}$$

If we define Eq. (13) by its matrix abbreviations, we obtain:

$$\left(I - M^*\right)\binom{Z_1}{F_2} = B\binom{F_1}{Z_2} \qquad \text{(Eq. 15)}$$

Re-arranging this last equation, we finally obtain the formula to compute the constrained multipliers:

$$\binom{Z_1}{F_2} = (I - M^*)^{-1}B\binom{F_1}{Z_2} \qquad \text{(Eq. 16)}$$

The new inverse matrix $(I - M^*)^{-1}$ is now totally different from $(I - \mathrm{M})^{-1}$ or $(I - \mathrm{M}')^{-1}$, and the exogenous shock may include both changes in final uses of Sector 1, but also changes in Sector 2's output.

A2. The Seychelles Industry Classification in 23 industries

	Industries
1	Agriculture
2	Fishing
3	Manufacture of fishery products
4	Manufacture of other food
5	Manufacture of beverage and tobacco
6	Manufacturing, other
7	Electricity, gas, steam and air conditioning supply
8	Water supply; sewerage, waste management and remediation activities
9	Construction
10	Wholesale and retail trade; repair of motor vehicles and motorcycles
11	Transportation and storage
12	Accommodation and food service activities
13	Information and communication
14	Financial and insurance activities
15	Real estate activities
16	Owner occupied dwellings
17	Professional, scientific and technical activities
18	Administrative and support service activities
19	Public administration and defence; compulsory social security
20	Education
21	Human health and social work activities
22	Arts, entertainment and recreation
23	Other service activities

A3. Simplified SAM of the Seychelles economy in 2014 (million SCR)

EXPENDITURE

		Activities	Commodities	Factors	HH	Gov.	Sav./inv.	RoW	Total
I	Activities		35246						35246
N	Commodities	20576			11389	3869	5125	17504	58463
C	Factors	14670							14670
	Households			14670		1693		-541	15822
O	Government		3018		2281			883	6182
M	Savings/Inv.				2152	620		2353	5125
E	Rest of World		20199						20199
	Total	35246	58463	14670	15822	6182	5125	20199	

Source: NBS (SUT_2014 + GDP Table) + CBS (Government Finance).

Table 7. The 23-industry Seychelles SAM in 2014

Activity columns

SAM 2014		Activity																						
		Agriculture	Fishing	Manufacture of fishery products	Manufacture of other food	Manufacture of beverage and tobacco	Manufacturing, other	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade; repair of motor vehicles and motorcycles	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities	Real estate activities	Owner occupied dwellings	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory social security	Education	Human health and social work activities	Arts, entertainment and recreation	Other service activities
Activity	Agriculture																							
	Fishing																							
	Manufacture of fishery products																							
	Manufacture of other food																							
	Manufacture of beverage and tobacco																							
	Manufacturing, other																							
	Electricity, gas, steam and air conditioning supply																							
	Water supply; sewerage, waste management and remediation activities																							
	Construction																							
	Wholesale and retail trade; repair of motor vehicles and motorcycles																							
	Transportation and storage																							
	Accommodation and food service activities																							
	Information and communication																							
	Financial and insurance activities																							
	Real estate activities																							
	Owner occupied dwellings																							
	Professional, scientific and technical activities																							
	Administrative and support service activities																							
	Public administration and defence; compulsory social security																							
	Education																							
	Human health and social work activities																							
	Arts, entertainment and recreation																							
	Other service activities																							
Commodity	Agriculture	29	0	3	43	11	0	0	0	6	9	4	276	0	0	0	0	0	0	0	0	0	0	0
	Fishing	0	0	231	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0
	Manufacture of fishery p	0	0	2013	0	0	0	0	0	0	1	1	104	0	0	0	0	0	0	0	0	0	0	0
	Manufacture of other fo	6	0	136	70	14	0	0	0	8	41	11	563	0	0	1	0	1	1	1	0	0	0	1
	Manufacture of beverage	0	0	0	1	36	0	0	0	0	10	1	149	0	0	3	0	0	0	0	0	0	1	0
	Manufacturing, other	25	109	754	22	190	368	929	84	1623	298	1167	390	275	64	170	0	23	115	267	29	188	137	73
	Electricity, gas, steam an	3	4	24	8	24	6	3	65	25	94	51	300	37	7	86	0	3	10	91	25	14	18	7
	Water supply; sewerage,	0	0	1	0	1	0	1	2	1	17	4	12	1	0	3	0	0	0	78	4	2	4	0
	Construction	1	1	26	1	5	7	4	4	85	28	40	49	23	29	17	0	9	10	113	19	1	18	6
	Wholesale and retail trad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transportation and stora	3	4	329	5	22	16	0	11	66	232	781	106	13	7	35	0	12	623	62	4	7	19	6
	Accommodation and foo	1	1	7	0	7	2	0	4	2	17	124	53	23	4	3	0	3	2	57	18	31	4	0
	Information and commun	2	1	24	2	6	9	1	4	16	50	68	82	9	32	35	0	8	23	67	15	9	11	8
	Financial and insurance a	20	4	21	1	3	5	0	4	44	72	56	121	14	144	150	0	5	32	32	5	20	19	4
	Real estate activities	5	9	6	6	5	15	1	2	32	259	112	114	67	64	33	0	25	31	86	1	45	21	22
	Owner occupied dwelling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Professional, scientific an	2	1	188	5	24	10	1	6	32	87	56	341	193	270	56	0	121	41	178	16	11	14	6
	Administrative and suppo	3	4	34	1	2	3	4	12	7	59	321	56	10	46	47	0	5	6	246	28	4	12	2
	Public administration and	2	4	33	1	2	3	0	2	7	15	13	54	9	17	10	0	5	6	5	3	2	5	2
	Education	1	2	15	0	1	1	0	1	3	9	6	25	5	8	5	0	2	3	12	5	1	3	1
	Human health and social	0	1	6	0	0	0	0	0	1	3	2	10	2	3	2	0	1	1	1	1	21	1	0
	Arts, entertainment and r	0	0	3	0	0	0	0	0	1	3	1	18	1	2	1	0	0	1	8	0	0	1	0
	Other service activities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Factor	K	198	173	568	21	189	122	268	1	317	753	885	1279	514	402	512	1377	208	214	718	0	83	0	53
	L	22	20	243	9	81	52	76	83	760	367	314	758	82	331	69	186	108	207	938	552	286	198	73
Final demand	Hoh																							
	Gov																							
	Sav/Inv																							
RoW	External																							
Total		323	337	4668	196	622	620	1289	287	3039	2423	4018	4887	1278	1430	1240	1562	540	1325	2961	726	726	486	263

Commodity columns

SAM 2014		Commodity																						
		Agriculture	Fishing	Manufacture of fishery products	Manufacture of other food	Manufacture of beverage and tobacco	Manufacturing, other	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade; repair of motor vehicles and motorcycles	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities	Real estate activities	Owner occupied dwellings	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory social security	Education	Human health and social work activities	Arts, entertainment and recreation	Other service activities
Activity	Agriculture	323																						
	Fishing		337																					
	Manufacture of fishery products			4668																				
	Manufacture of other food				196																			
	Manufacture of beverage and tobacco					622																		
	Manufacturing, other						620																	
	Electricity, gas, steam and air conditioning supply							1289																
	Water supply; sewerage, waste management and remediation activities								287															
	Construction									3039														
	Wholesale and retail trade; repair of motor vehicles and motorcycles										2423													
	Transportation and storage											4018												
	Accommodation and food service activities												4887											
	Information and communication													1278										
	Financial and insurance activities														1430									
	Real estate activities															1240								
	Owner occupied dwellings																1562							
	Professional, scientific and technical activities																	540						
	Administrative and support service activities																		1325					
	Public administration and defence; compulsory social security																			2961				
	Education																				726			
	Human health and social work activities																					726		
	Arts, entertainment and recreation																						486	
	Other service activities																							263
Commodity	Agriculture																							
	Fishing																							
	Manufacture of fishery p																							
	Manufacture of other fo																							
	Manufacture of beverage																							
	Manufacturing, other																							
	Electricity, gas, steam an																							
	Water supply; sewerage,																							
	Construction																							
	Wholesale and retail trad																							
	Transportation and stora																							
	Accommodation and foo																							
	Information and commun																							
	Financial and insurance a																							
	Real estate activities																							
	Owner occupied dwelling																							
	Professional, scientific an																							
	Administrative and suppo																							
	Public administration and																							
	Education																							
	Human health and social																							
	Arts, entertainment and r																							
	Other service activities																							
Factor	K																							
	L																							
Final demand	Hoh																							
	Gov	33	11	6	148	598	1152	0	0	20	0	17	718	175	6	30	0	0	36	0	0	2	55	10
	Sav/Inv																							
RoW	External	292	0	1699	1359	278	11788	0	0	120	0	1482	0	528	84	0	0	1954	615	0	0	0	0	0
Total		648	349	6372	1703	1498	13560	1289	287	3178	2423	5517	5605	1980	1520	1271	1562	2494	1976	2961	726	729	541	273

Factor, final demand, RoW and total columns

SAM 2014		Factor		Final demand			RoW	Total
		K	L	Hoh	Gov	Sav/Inv	External	
Activity	Agriculture							323
	Fishing							337
	Manufacture of fishery products							4668
	Manufacture of other food							196
	Manufacture of beverage and tobacco							622
	Manufacturing, other							620
	Electricity, gas, steam and air conditioning supply							1289
	Water supply; sewerage, waste management and remediation activities							287
	Construction							3039
	Wholesale and retail trade; repair of motor vehicles and motorcycles							2423
	Transportation and storage							4018
	Accommodation and food service activities							4887
	Information and communication							1278
	Financial and insurance activities							1430
	Real estate activities							1240
	Owner occupied dwellings							1562
	Professional, scientific and technical activities							540
	Administrative and support service activities							1325
	Public administration and defence; compulsory social security							2961
	Education							726
	Human health and social work activities							726
	Arts, entertainment and recreation							486
	Other service activities							263
Commodity	Agriculture			211	0	0	55	649
	Fishing			92	0	0	0	349
	Manufacture of fishery p			13	0	0	4241	6373
	Manufacture of other fo			631	0	0	218	1703
	Manufacture of beverage			1015	0	0	283	1498
	Manufacturing, other			1568	0	2525	2166	13560
	Electricity, gas, steam an			251	0	0	131	1289
	Water supply; sewerage,			99	0	0	54	286
	Construction			92	0	2480	110	3178
	Wholesale and retail trad			0	0	0	2423	2423
	Transportation and stora			587	0	0	2565	5517
	Accommodation and foo			3375	0	0	1866	5605
	Information and commun			821	59	0	618	1980
	Financial and insurance a			166	88	0	486	1519
	Real estate activities			143	0	0	167	1271
	Owner occupied dwelling			1005	0	0	557	1562
	Professional, scientific an			2	0	0	833	2494
	Administrative and suppo			685	0	0	383	1977
	Public administration and			13	2743	0	5	2961
	Education			67	431	82	36	726
	Human health and social			118	478	11	65	729
	Arts, entertainment and r			261	71	24	144	541
	Other service activities			174	0	2	96	272
Factor	K							8854
	L							5816
Final demand	Hoh	8854	5816		1693,00		-541,00	15822
	Gov			2281,00			883,00	6182
	Sav/Inv			2152,00	620,00		2353,00	5125
RoW	External							20199
Total		8854	5816	15822	6182	5125	20199	

NB: an EXCEL file of this SAM is available on simple request to authors.