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Social Accounting Matrix on the Base of the Mexican System of National Accounting*

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Links between institutional sectors and economic activities with National Accounting System of Mexico are studied used accounting multipliers. Key sectors had changed to strategic or leading as oil and gas extraction and dairy product manufacturing, i.e., Mexico went from a producer of goods to a service provider country, losing value added in their production chains. The mixed income is leading/independent economic activity for woman whose income is between 1 and 5 minimum wages. This is really important in the domestic economy through its impact on solidarity activities: providing care and support and providing food. Moreover, non-financial corporations and households of 10 or more minimum wages for income investing in strategic sectors such as retail trade and wholesale and manufacturing products derived from oil and coal. This is evidence of two Mexicos: the traditional and industrialized.

Keywords: social accounting matrix, national accounting, linkages, accounting multipliers, input-output tableau

Introduction

Many works have been written on the application of social accounting matrix (SAM), accounting linkages and multipliers but none shows the low impact of public policies that encourage certain industries giving preferential treatment in taxes, water, electricity, etc., arguing that generate new high paying jobs and technological development of the region. Bolio, Remes, Lajous, Manyika, Roseé, and Ramirez (2014) explained that in Mexico the growth and prosperity are output of a two-speed economy (Mckinsey Global Institute, 2014). In a modern Mexico, a high-speed and technologically forward multinationals factories that compete in global markets and universities that graduate more engineers that Germany and traditional Mexico, a land of sub-scale, low-speed, technologically backward, unproductive enterprises and many of which operate in informal economy. For eight decades Mexico has been unable to grow and develop economically to substantially improve the living standards of its population. The free trade in North America has come to break the production chains. This is evident in the study of direct, cross, and cyclical multipliers. The important oil

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industry impacts poorly homes, also the automotive industry with Original Equipment manufactures (OEMs) and indirect jobs linked to it have no impact on economic development. This is evident in the study of direct, cross, and cyclical multipliers.

This paper shows these two Mexicos by building a social accounting matrix similar to that proposed by Thorbecke and Jung (1996), in terms of branches of economic activity and applying the theory of Leontief multipliers (Thorbecke, 2000). In section 2 provides a brief review of the SAMs for Mexico published in recent years ago. In section 3 the methodology used for this analysis is established. In section 4 the results of the major multipliers are presented in the direct-indirect-cyclic sequence. In section 5 the analysis is done and the results are discussed. Finally, sections 6 and 7 give the conclusions and references.

State of the Art

The latest SAMs, this proposal by Núñez (2015) focused on analyzing taxes on the extraction of hydrocarbons using a general equilibrium model. In Mexico oil derivatives are very expensive because of these taxes. Other works of Núñez (2008) evaluated social policies to alleviate poverty disaggregating household income by deciles. Multisectoral model is used incorporating input-output tableau (IOT) in 2000. This tableau is obtained from the 1980 data using the biproportional matrix transformation or Row-Column Adjustment of Successive-approaches (RAS) method. Pineda (2011) worked on a social accounting matrix (SAM, 2003) based on the system of national accounting of Mexico (SNCM, 2014), but it does not transform to Thorbecke (2000) form, i.e., from balance equations system to factors, agents, and accounts matrix arrangement. In that work financial and social policies were evaluated, the results evidence weak linkage between financial sector and real economy (structure weak of financial system). Intermediaries and financial markets do not contribute to the economy strongly. Núñez (2008) proposed a SAM-MX00 for Mexico on the base of the first three accounts (good & services, production, and generation of income), capital, and good & services with outside accounts of the SNCM, year 2000. Institutional sectors took account the gross operating surplus for enterprises and wage and contributions for household. Gross mixed income was not considered. The capital account was in terms of saving/investment (it is an inequality). The other accounts were not used (primary allocated, secondary distribution and use income, and financial). The SAM-MX00 was disaggregated into 43 accounts: 10 household deciles, 18 productive activities, three public goods, and other 12 accounts: companies, government with three kinds of taxes, two kinds of transfers, a savings/investment accounts, productive factors labor and capital, private consumption, and rest of word. This structure does not consider, for example, traditional factories (tortilla, bakeries), traditional and high-speed factories (tequila, breweries, bakeries, and chocolate), and technological forward factories (auto parts, OEMs, and steelmakers).

Kim Kijong (2008) studied the multiplier effects of a hypothetical new sector to change the social accounting matrix. The new sector is assigned a composite of factors by gender and skills. Furthermore, if these individuals are in the government program “Expanded public works programme”. Employment and income distribution are misleading, i.e., underestimate the impact of the proposed target level of employment.

Minzer and Solís (2014) mixed equations account balance of goods and services account to the economic activities of IOT, factors of investment and trade with the rest of the world analyzed certain tax reform measures such as the increase in value added tax in some branches of economic activity and its impact on tax collection and poverty.

Other authors as Blancas (2006) and Laguna (2010) analyzed the inter-relationships and supply chains in Mexico. And Sobarzo (2009) discussed some proposals for tax reform. The proposal is financed through tax the new social security system. The social accounting matrix calibrates a general equilibrium model in the context of coexistence of formality and informality in the labor market.

The structure of the System of National Accounts of Mexico (SCNM) is made up of balance equations linking macroeconomic with microeconomic aspects. The SAMs to Mexico mentioned herein take into account some industry groups only, all of them broken down in terms of population deciles rather than the distribution of income-expenditure in terms of minimum wages.

The proposed social accounting matrix (SAM-MX11) is founded on complete economic structure of the system of national accounting of Mexico, year 2011 (System of National Accounting of Mexico, 2011) (SNAM-2011), MFTIS (Mexican Foreign Trade Inquiry System, 2011), and ENIGH (National Survey on Household Income and Spending, 2012). The square matrix size is 288 and showed in Table 1, it is Defourny and Thorbecke type (Defourny & Thorbecke, 1984; Thorbecke & Jung, 1996). The SNAM-2011 comprises balance equations and accumulation and current accounts. National accounting: goods and services (G&S), production (P), generation of income (GI), allocation of income (PAI), distribution of income (DI), use of income (UI), capital (C), gross fixed capital formation (GFCF), financial (F), goods and services with the outside (G&S outside). The latter account is divided: current transferences (TC) and capital transferences (TK). SNAM has institutional units: non-financial corporations (NF), financial corporations (F), government units, including social security funds (G), non-profit institutions serving households (NPIsSH), households (H), and the rest of the world (RW). Households are formed by customers and producers. The GI, PAI, DI, UI, C, and GFCF accounts were disaggregated on institutional sectors. Household sector is broken down into income-expenditure deciles or minimum salaries level (mw).

The input-output tableau (IOT-MX11) is included into SAM-MX11. The IOT-MX11 is built by economic activities added into sectors, subsectors, and branches. IOT-MX11 uses the North America industrial classification system (NAICS) code of 2007. The tableau size is 165.

The production account presents economic activities by branches. The goods and services account shows economics activities and institutional sectors.

Links between institutional sectors and economic activities with SNAM-2011 were studied by using accounting multipliers. IOT-MX11 was obtained by using the RAS method to OIT-MX 2008. Table 2 presents disaggregated IOT-MX11. Each of the aij entrances is Tij matrix of different sizes, T13 is the matrix which allocates the value added generated by the production activities into income accruing to the various factors of productions. T33 shows the intermediate input requirement, T32 reflects the expenditure pattern of the institutional sectors on the commodities which they consume. T21 shows the scanning of the factorial income distribution into institutional sectors. T22 gives the inter-institutional transfers.

The current transferences entrances were disaggregated to economic activities branches and NAFTA countries and the rest of the world. To do this, it was necessary to make the correspondence between the tariff code (Mexico Foreign Trade Inquiry System, 2015) and NAICS code (United States Census Bureau, 2014), because export and import of goods and services are not present for countries in SNAM.

Table 1

Social Accounting Matrix (SAM) on the Base of the System of National Accounting of Mexico (SNAM)

Schematic social accounting matrix on based defourny and thorbecke (1984)			Expenditure													
			Endogenous							Exogenous						
				Factors			Enterprises				Rest of world		Capital accounts			
			Productive activities	L	k	Households	Nfs	Fs	Npissh	Government	Current t.	K. T.	Capital	Gfkf	Financial	Totals
Incomes	productive activities		T33 **A11**	0	0 **A12**	T32h		T32e		X34	X35		X36			Y3
	Endogenous Factors	L	T13	0	0	0		0		X14	X15		X16			Y1
		K														
	Households		0 **A21**	T21lh	T21kh **A22**	T22hh		T22eh		X24h	X25h		X26h			Y2h
	Enterprises	Nfs	0	T21le	T21ke	T22he		T22ee		X24e	X25e		X26e			Y2e
		Fs														
		Npissh														
	Government		T43	L41l	L41k	L42h		L42e		T44	T45		T46			Y4
	Exogenous Rest of world	Curren t t.	T53	L51l	L51k	L52h		L52e		T54	T55		T56			Y5
		K. T.														
	Capital accounts	Capital														
		Gfkf	T63	L61l	L61k	L62h		L62e		T64	T65		T66			Y6
		Financial														
Totals			Y3	Y1l	Y1k	Y2h		Y2e		Y4	Y5		Y6			

T, transference; K.T., capital transferences; nFS, non-financial companies; FS, financial companies; NPIsSH, non-profit institutions serving household; GFKF, gross fix capital formation; L, work; K, capital.

Table 2

IOT Compounds. Matrix 165x165

SECTOR	A12 - SAM aggregated = OIT	NAICS code	Number of accounts
11	Agriculture, hunting, forestry and fishing	1111-1114, 1119, 1121, 1122-1125, 1129, 1131-1133, 1141, 1142, 1151-1153.	19
21	Mining and quarrying	2111, 2121-2123, 2131.	5
22	Electricity, gas, and water supply	2211, 2221, 2222.	3
23	Construction	23: 2361, 2362, 2371-2373, 2379, 2381-2383, 2389.	1
31-33	Manufacturing	3111-3119, 3121, 3122, 3131-3133, 3141, 3149, 3151, 3152, 3159, 3161, 3162, 3169, 3211, 3212, 3219, 3221, 3222, 3231, 3241, 3251-3256, 3259, 3261, 3262, 3271-3274, 3279, 3311-3315, 3321-3329, 3331-3336, 3339, 3341-3346, 3351-3353, 3359, 3361-3369, 3371, 3372, 3379, 3391, 3399.	86
43-46	Commerce	43-46: 4311.	1
48	Transport and communications	4862, 4869, and the rest of the sector 48: 4811, 4812, 4821, 4832, 4841, 4851-4855, 4859, 4871, 4872, 4879, 4881-4885, 4889.	3
49	Mail and storage	49: 4911, 4921, 4931.	1
51	Mass media information	51: 5111, 5112, 5121, 5122, 5151, 5152, 5171, 5172, 5174, 5179, 5182, 5191.	1
52	Financial services and of insurances	5211, 5221-5225, 5231, 5332, 5239, 5241, 5242.	11
53	Real-estate and rental of personal property and intangible services	53: 5311-5313, 5321-5324, 5331.	1
54	Professional, scientific, and technical services	54: 5411-5419, 5511.	1
55	Management of companies and enterprises	55: 5511.	1
56	Waste management and remediation services	5621, and the rest of the sector 56: 5611-5617, 5619.	2
61	Educational services	61: 6111-6117.	1
62	Health and social care	6214, 6216, the rest of the sub-sector 621: 6211-6213, 6215, 6219; 6221-6223, 6231-6233, 6239, 6241-6244.	14
71	Cultural and sporting services, recreation, and other recreational services	71: 7111-7115, 7121, 7131, 7132, 7139.	1
72	Temporary accommodation services and preparation of foods and beverages	72: 7211-7213, 7221-7224.	1
81	Other services except government activities	8141 and the rest of the sector 81: 8111-8114, 8121-8124, 8129, 8131, 8132.	2
93	Activities of the government and activities of international organizations and offshore	9311-9318, 9321.	9
	Total		165

The intermediate consumption and production account entrances were open to economic activities branches. The first is IOT 2011 and the second is gross production value (basic prices). The goods & services with outside account entrances: remunerations, rental of property, and current transfers received/paid were broken down by NAFTA country redistribution like flows of Outward/Inward Direct Investment (Foreign Direct Investment, 2016).

Consumption of fixed capital (CFC), taxes less subsidies on products and adjustment by rounding are distributed as gross values added.

Capital transferences received/paid and current transferences paid are not known. Adjustments due to changes to pension rights received/paid from/to the rest of the world (Use of income account) were adjusted few years ago. These changes were consequence of the Pension Reform in 1996.

Lending or financing and current external balance have same value but the sign changed.

The net factor income from/to the rest of the world (NFIRW), is disaggregated from the cell net added value so should be adjusted in the successive cells.

The original structure of the accounting matrix proposal is extensively explained in the paper predecessor (Ledesma-Carrión, Hernández-Hernández, & Muciño-Porras, 2015). This SAM is in terms of the balance equations for all accounts which integrate the SCNM. The matrix here studied in terms of Thorbecke (2000) is obtained simply by rearranging and/or adding accounts.

Methodology

Accounting multipliers and linkages use Leontief theory (Thorbecke, 2000; Pineda, 2011; Núñez, 2008; Kim, 2008; Minzer & Solís, 2014). Because revised data appear up to 2011, the SAM and OIT were calculated for 2011. Links and relations between economic sectors and branches involve the input-output tableau, the distribution by countries and industry of goods and services of imports and exports in the balance of trade (BT) and balance of payments (BP) and the relationship between institutional sectors and branches of economic activity make a system of accounting balance equations.

Data between economic and institutional sectors through SNAM were used to redistribution cell T32.

Households were open by minimum salaries levels of income and mixed income was disaggregated by sex for the first five deciles (in terms of mw) of income and not paid work is by (i) providing food, (ii) providing cleaning and maintenance of housing, (iii) providing cleaning and care of clothing and shoes, (iv) providing shopping and household management, (v) providing care and support, and (vi) providing help to other households and volunteer work. The redistributions used National Income and Expenditure Survey of Households (ENIGH [Encuesta Nacional de Ingreso y Gasto de los Hogares], 2012). The ENIGH is biannual.

The SNAM-MX11 does not provide for the production of narcotics (cannabis) in gross domestic product (GDP) and intermediate consumption (IOT-MX11) and their impact on the ENIGH. Because of this, the lower deciles are underestimated. Many families work for drug trafficking as distributers and/or producers. The families work a portion of the land for poppy and cannabis and one for beans, corn, sorghum, and other legal crops. Some of the medium and upper deciles are money lauder through their companies. The rich do not respond to interviewers, they are also underestimated.

The discrepancies between current transfers received by households (it is reported by ENIGH) and total transferences reported by BP (it is calculated with financial system data) reveal the lack of response of households.

Also, the BP does not record earnings of Mexican producers abroad, for example, Televisa, CEMEX, Bimbo, Vitro Group, etc.

The lack of registration of iron production and that was exchanged for chemicals to produce drugs, production, internal distribution, export and transfer of drugs, do not appear in BP and BT, in addition, trafficking in persons and smuggling of weapons appear not quantified in BP and BT.

Accounting multipliers direct Ma_1, cross Ma_2, and cyclical Ma_3 are defined as

$$\mathrm{Ma}_1 = \begin{pmatrix} (\mathrm{I} - \mathrm{A}_{11})^{-1} & 0 \\ 0 & (\mathrm{I} - \mathrm{A}_{22})^{-1} \end{pmatrix} \quad (1)$$

$$\mathrm{Ma}_2 = \begin{pmatrix} \mathrm{I} & (\mathrm{I} - \mathrm{A}_{11})^{-1}\mathrm{A}_{12} \\ (\mathrm{I} - \mathrm{A}_{22})^{-1}\mathrm{A}_{21} & \mathrm{I} \end{pmatrix} \quad (2)$$

$$\mathrm{Ma}_3 = \begin{pmatrix} (\mathrm{I} - (\mathrm{I} - \mathrm{A}_{11})^{-1}\mathrm{A}_{12}(\mathrm{I} - \mathrm{A}_{22})^{-1}\mathrm{A}_{21})^{-1} & 0 \\ 0 & (\mathrm{I} - (\mathrm{I} - \mathrm{A}_{22})^{-1}\mathrm{A}_{21}(\mathrm{I} - \mathrm{A}_{11})^{-1}\mathrm{A}_{12})^{-1} \end{pmatrix} \quad (3)$$

Direct multipliers are those which measure the interrelationship between productive activities and institutional sectors, equation (1). No mix of productive and institutional sectors. This interrelationship is a dimensionless proportionality constant.

From equation (2), the cross multipliers measure the interaction between sectors, that is, given the direct impact of an economic activity is affected by the subsequent interaction with any institutional sector and vice versa.

Cyclical multipliers are closing the cycle, equation (3): economic activity-institutional sector-economic activity. That is, given the cross-impact of economic activity and institutional sector, how it is affected by the subsequent interaction with any economic activity. The other cycle would be: institutional sector-economic activity-institutional sector.

Results

The fixed-price multiplier analysis is showed in the Tables 3-6 for key, strategic, leading, and independent activities respectively.

From Table 3, the GI impact has two items: the gross operating surplus (GOS) and wage and salaries, of non-financial companies and household for deciles 1-6 (current transferences), for the deciles 7-10 the impact is in PIA, DI, and UI accounts: remunerations, current transferences, rental of properties, and saving. The government supports housing credit through financial institutions: publics, Housing Fund for Institute for Social Security and Services for State Workers (FOVISSSTE) and Institute of National Housing Fund for Workers (INFONAVIT)) and privates. Also, the government supports programs for entrepreneurs and self-employment. The population with income between deciles 2 and 9 is benefited with these programs. The “Crusade against hunger” program is aimed at people in the income decile 1.

The wholesale trade & retail trade and the real estate and rental and leasing are more impactful than oil and gas extraction and petroleum and coal products manufacturing production respect to the gross value of production (GVP). Mexico has become a trade and service country and does not remain as producer of goods. The strength of the domestic economy was slaughtered to maintain stable macroeconomic variable by free trade agreements (FTAs). The sectors 48 and 8, transport and other services except public administration, and subsector 561, administrative and support services were benefited during this change. The sectors of electric power generation, transmission and distribution, basic chemical manufacturing, bakeries and tortilla manufacturing, animal slaughtering and processing, oilseed and grain farming, and dairy product manufacturing become traditional. The information sector growth is due to technological development.

Table 3

Key Institutional and Economic Sectors

Variable code	Standardized forward linkages	Standardized backward linkages	Name
43-46	5.875	1.100	Wholesale trade & Retail trade
3241	3.980	1.053	Petroleum and coal products manufacturing
REST 561	3.649	1.267	THE REST OF THE SUB-SECTOR 561: administrative and support services
REST 48	3.578	1.411	THE REST OF THE SECTOR 48: transportation
L w&s S10	3.162	1.119	Wage and salaries + effective employer contribution for pension + effective employer contribution for nonpension + imputed contribution by employers for pension + imputed contribution by employers for nonpension. Household with 10 minimum salaries
51	2.722	1.147	Information
2211	2.620	1.154	Electric power generation, transmission and distribution
54	2.605	1.040	Professional, scientific, and technical services
3116	2.141	1.348	Animal slaughtering and processing
72	1.826	1.151	Accommodation and food services
L w&s S9	1.783	1.119	Wage and salaries + effective employer contribution for pension + effective employer contribution for nonpension + imputed contribution by employers for pension + imputed contribution by employers for nonpension. Household with 9 minimum salaries
3118	1.744	1.237	Bakeries and tortilla manufacturing
REST 81	1.692	1.139	THE REST OF THE SECTOR 81: other services (except public administration)
H DI S10	1.672	1.208	Household with 10 minimum salaries. Distribution of income
3121	1.671	1.234	Beverage manufacturing
3361	1.590	1.107	Motor vehicle manufacturing
L w&s S8	1.549	1.119	Wage and salaries + effective employer contribution for pension + effective employer contribution for nonpension + imputed contribution by employers for pension + imputed contribution by employers for nonpension. Household with 8 minimum salaries
K NPIsSH	1.486	1.151	Gross operating suplus + consumption of fix capital. Non-profit institutions serving household
5221	1.485	1.027	Depository credit intermediation
L w&s S7	1.382	1.119	Wage and salaries + effective employer contribution for pension + effective employer contribution for nonpension + imputed contribution by employers for pension + imputed contribution by employers for nonpension. Household with 7 minimum salaries

From Table 4, the rental of properties of nFS is the economic activity which is more strategic. It is following for FS and NFIRW. The GVP of petroleum and coal products manufacturing, plastics product manufacturing and resin, synthetic rubber and synthetic thread, and filaments manufacturing are strategic. The current transferences of nFS and the rental of properties of FS are strategic activities whereas households are key activities. The intermediate consumption of manufacturing of petroleum and coal, basic chemical, motor vehicle parts and resin, synthetic rubber, synthetic thread, and filaments are averagely strategic.

From Table 5, the more intensive leading economic activities are the manufacturing of pharmaceutical and medicine, dairy products, animal food, sugar and confectionery products, other food, iron and steel mills and ferroalloy, other crop farming and cattle ranching, and farming in production and intermediate consumption.

The wages and salaries of household decile 2 of income and financial companies and the effective employer contribution for non-pension of non-financial companies are linked to construction sector like leading activity.

Table 4

Strategic Institutional and Economic Sectors

Variable code	Standardized forward linkages	Standardized backward linkages	Name
K nFS	15.267	0.223	Gross operating suplus + consumption of fix capital. Non-financial companies
H API S10	5.967	0.887	Household with 10 minimum salaries. Primary allocation of income
53	5.868	0.931	Real estate and rental and leasing
H UI S10	5.169	0.967	Household with 10 minimum salaries. Use of income
H API S9	3.264	0.887	Household with 9 minimum salaries. Primary allocation of income
3251	3.206	0.858	Basic Chemical Manufacturing
H UI S9	2.843	0.967	Household with 9 minimum salaries. Use of income
H API S8	2.806	0.887	Household with 8 minimum salaries. Primary allocation of income
2111	2.757	0.937	Oil and gas extraction
H API S7	2.478	0.887	Household with 7 minimum salaries. Primary allocation of income
H UI S8	2.448	0.967	Household with 8 minimum salaries. Use of income
H UI S7	2.166	0.967	Household with 7 minimum salaries. Use of income
H API S6	2.022	0.887	Household with 6 minimum salaries. Primary allocation of income
3363	1.892	0.910	Motor vehicle parts manufacturing
E FS PAI	1.836	0.767	Enterprises. Financial companies. Primary allocation of income
H UI S6	1.774	0.967	Household with 6 minimum salaries. Use of income
1111	1.712	0.730	Oilseed and grain farming
H API S5	1.656	0.887	Household with 5 minimum salaries. Primary allocation of income
E FS UI	1.590	0.571	Enterprises. Financial companies. Use of income
H UI S5	1.459	0.967	Household with 5 minimum salaries. Use of income

Table 5

Leading Institutional and Economic Sectors

Variable code	Standardized forward linkages	Standardized backward linkages	Name
H DI S9	0.997	1.208	Household with 9 minimum salaries. Distribution of income
3113	0.965	1.282	Sugar and confectionery product manufacturing
L w&s S5	0.963	1.119	Wage and salaries + effective employer contribution for pension + effective employer contribution for nonpension + imputed contribution by employers for pension + imputed contribution by employers for nonpension. Household with 5 minimum salaries
1123	0.946	1.335	Poultry and egg production
3314	0.908	1.116	Nonferrous metal (except Aluminum) production and processing
2221	0.888	1.121	Water collection, treatment and supply of water
H DI S8	0.882	1.208	Household with 8 minimum salaries. Distribution of income
3256	0.861	1.120	Soap, cleaning compound, and toilet preparation manufacturing
61	0.856	1.443	Educational services
5241	0.846	1.082	Insurance carriers
3152	0.834	1.033	Cut and sew apparel manufacturing
H DI S7	0.800	1.208	Household with 7 minimum salaries. Distribution of income
5224	0.784	1.241	Securities and commodity contracts intermediation and brokerage
3231	0.781	1.073	Printing and related support activities
3211	0.769	1.194	Sawmills and wood preservation

Table 5 continued

Variable code	Standardized forward linkages	Standardized backward linkages	Name
L w&s S4	0.729	1.119	Wage and salaries + effective employer contribution for pension + effective employer contribution for nonpension + imputed contribution by employers for pension + imputed contribution by employers for nonpension. Household with 4 minimum salaries
3272	0.701	1.042	Glass and glass product manufacturing
5242	0.701	1.083	Agencies, brokerages, and other insurance related activities
L GMI S9	0.690	1.128	Gross mix income. Household with 9 minimum salaries
71	0.690	1.117	Arts, entertainment, and recreation

Secondly, financial sector has leading activities through of management of companies and enterprises, securities and commodity contracts intermediation and brokerage, non-depository credit intermediation, and insurance carriers.

Thirdly, the mixed income for sex and kind of activity impact likes leading economic branch: providing care and support for woman for deciles 3, 2, 4, 1, and 5, in this order. It follows the provided food for woman for deciles 5-1. The NPIsSH are led by imputed contribution by employers for non-pension.

From Table 6, the GVP of grain and oilseed milling, educational services, plastic product manufacturing, and insurance carriers are the strongest independent activities.

Table 6

Independent Institutional and Economic Sectors

Variable code	Standardized forward linkages	Standardized backward linkages	Name
H API S3	0.918	0.887	Household with 3 minimum salaries. Primary allocation of income
3253	0.915	0.870	Pesticide, fertilizer, and other agricultural chemical manufacturing
3344	0.908	0.627	Semiconductor and other electronic component manufacturing
3399	0.870	0.786	Other miscellaneous manufacturing
H UI S3	0.824	0.967	Household with 3 minimum salaries. Use of income
1113	0.797	1.000	Fruit and tree nut farming
3132	0.794	0.806	Fabric mills
2123	0.746	0.950	Nonmetallic mineral mining and quarrying
3359	0.740	0.673	Other electrical equipment and component manufacturing
3259	0.724	0.651	Other chemical product and preparation manufacturing
3329	0.701	0.681	Other fabricated metal product manufacturing
3328	0.686	0.951	Coating, engraving, heat treating, and allied activities
1133	0.682	0.978	Logging
3255	0.665	0.997	Paint, coating, and adhesive manufacturing
H API S2	0.653	0.887	Household with 2 minimum salaries. Primary allocation of income
E FS DI	0.644	0.811	Enterprises. Financial companies. Distribution of income
3342	0.624	0.647	Communications equipment manufacturing
3336	0.616	0.669	Engine, turbine, and power transmission equipment manufacturing
3341	0.613	0.611	Computer and peripheral equipment manufacturing
3122	0.597	0.954	Tobacco manufacturing

The import and export subsidies into GI account are government independent activities. The rental of property of non-financial companies is an intensive independent activity. Primary activities do not appear as independent

except other animal production. Many secondly and thirdly are independent as water collection, treatment, and supply of water; steel product manufacturing from purchased steel; paint, coating, and adhesive manufacturing; iron and steel mills and ferroalloy manufacturing, general public administration, regulating and promoting economic development, administrative activities of social welfare institutions, among other activities.

The first 10 economic activities with direct multipliers more intensives and OEMs activities are showed in Table 7: 2122 Metal ore mining, Rest 48 Transportation except pipeline, 5224 Securities and commodity contracts intermediation and brokerage, 5232 Securities and commodity exchanges, 2221 Water collection, treatment and supply of water, 55 Management of companies and enterprises, 3241 Petroleum and coal products manufacturing, 9318 National security activities, 3113 Sugar and confectionery product manufacturing, 3118 Bakeries and tortilla manufacturing, 3361 Motor vehicle manufacturing, 3363 Motor vehicle parts manufacturing and 3362 Motor vehicle body and trailer manufacturing, 3161 Leather and hide tanning and finishing, 3162 Footwear manufacturing.

From Tables 7-9, taking the activity more direct multiplier value, metal ore mining, this affects to petroleum and coal products manufacturing by a factor of 0.12820. This same activity has a maximum cross multiplier factor 0.09061 with capital of non-financial corporations, 0.00786 with property income of households with 10+ mw and 0.00327 with the wages and salaries of these same households. For gross mixed income of household with 10+ mw the factor is 0.00599.

In the case of cyclical multipliers of that same economic activity the factor is 0.00155 for the petroleum and coal products manufacturing, 0.00199 for transportation except pipeline, and 0.00444 for real estate and rental and leasing.

Other activity that represents modern Mexico is motor vehicle manufacturing. This has direct multipliers of 0.50802 and 0.26277 for motor vehicle parts manufacturing and wholesale trade & retail trade respectively. Cross multipliers are 0.06078, 0.00783, and 0.00345 with capita of non-financial companies, rental of property for household with income of 10+ mw and gross mixed income of same households, and cyclical multipliers: 0.00432, 0.00193, and 0.00150 for real estate and rental and leasing, transportation except pipeline and petroleum, and coal products manufacturing respectively.

Economic activities representative of modern and traditional Mexico are bakeries and tortilla manufacturing. The maximum direct impacts are 0.33837 (1111, oilseed and grain farming), 0.20812 (43-46, wholesale trade & retail trade), 0.18531 (3112, grain and oilseed milling), 0.07422 (3251, basic chemical manufacturing), and 0.05384 (3241, petroleum and coal products manufacturing).

Table 7

Direct Multipliers

Row code	2122	Row code	REST 48	Row code	5224	Row code	5232	Row code	2221
2122	2.81522	REST 48	2.23917	5224	2.20312	5232	2.15328	2221	2.13249
3241	0.12820	3241	0.46336	55	0.20338	51	0.37448	3251	0.29299
2211	0.12491	2111	0.20490	54	0.14080	54	0.15131	43-46	0.11251
REST 561	0.10129	43-46	0.10891	REST 561	0.13048	5221	0.10358	2111	0.07843
43-46	0.08611	3363	0.07065	51	0.09606	55	0.07683	3241	0.06265
3259	0.06605	54	0.06033	53	0.08736	REST 561	0.07334	54	0.04706
2111	0.06184	REST 561	0.05624	REST 48	0.08195	43-46	0.05559	REST 48	0.02988
53	0.05510	53	0.03477	2211	0.05744	53	0.04664	3399	0.02748
54	0.05305	3251	0.02472	43-46	0.04260	2211	0.03625	REST 561	0.02089

Table 7 continued

Row code	2122	Row code	REST 48	Row code	5224	Row code	5232	Row code	2221
3251	0.03626	3336	0.02412	3241	0.03543	REST 81	0.03622	2211	0.02000
REST 48	0.01975	REST 81	0.02304	3221	0.02961	3221	0.03473	3273	0.01715
REST 81	0.01899	55	0.02208	REST 81	0.02786	3344	0.03423	3259	0.01672
51	0.01736	51	0.02156	3231	0.02629	3231	0.02975	REST 81	0.01621
5241	0.01560	2211	0.01689	5221	0.02514	3241	0.01818	53	0.01349
3339	0.01319	5221	0.01305	5241	0.02396	REST 48	0.01347	55	0.01279
55	0.01260	5241	0.01289	2111	0.01782	5241	0.01197	51	0.01254
5221	0.01250	72	0.01247	72	0.01607	72	0.01160	3329	0.00742
2221	0.01084	3262	0.00881	3251	0.01417	3251	0.01078	2123	0.00705
Row code	55	Row code	3241	Row code	9318	Row code	3113	Row code	3118
55	2.12420	3241	2.11919	9318	2.11087	3113	2.10616	3118	2.10600
54	0.11245	2111	0.92665	3241	0.13989	1119	0.49673	1111	0.33837
REST 561	0.06915	3251	0.05325	2111	0.06906	43-46	0.15598	43-46	0.20812
53	0.03600	43-46	0.04731	43-46	0.06137	3241	0.07637	3112	0.18531
3241	0.02553	55	0.02637	3251	0.04860	REST 561	0.06967	3251	0.07422
51	0.02411	REST 48	0.02212	72	0.04253	3112	0.05688	3241	0.05384
5221	0.01836	3327	0.01314	2211	0.04239	3251	0.05576	REST 561	0.04011
2111	0.01150	REST 561	0.00978	51	0.03806	2111	0.04282	3261	0.03903
43-46	0.00883	54	0.00825	REST 48	0.02067	3261	0.04157	REST 48	0.03674
72	0.00776	5221	0.00582	54	0.01986	2211	0.03922	2111	0.03630
5224	0.00736	2211	0.00546	REST 561	0.01978	54	0.03633	53	0.03183
2211	0.00697	53	0.00380	3329	0.01636	3119	0.03478	2211	0.02859
REST 48	0.00678	51	0.00367	3328	0.01553	3253	0.03168	3113	0.02484
3231	0.00332	5224	0.00217	REST 81	0.01399	REST 48	0.03130	3119	0.01965
REST 81	0.00319	72	0.00212	3359	0.00893	53	0.02940	3253	0.01869
3221	0.00313	3329	0.00173	2221	0.00852	3222	0.02828	54	0.01847
5241	0.00299	3312	0.00164	3363	0.00775	1113	0.02684	3222	0.01695
3251	0.00254	3324	0.00150	53	0.00669	3115	0.02402	3115	0.01526
Row code	3361	Row code	3362	Row code	3363	Row code	3161	Row code	3162
3361	1.88403	3362	1.72453	3363	1.79472	3161	1.55610	3162	1.80840
3363	0.50802	3311	0.30809	43-46	0.12197	3116	0.40348	3161	0.26009
43-46	0.26277	43-46	0.17409	3311	0.06858	43-46	0.18958	43-46	0.18872
3261	0.07505	3363	0.08211	3344	0.06290	REST 561	0.10090	3116	0.08535
REST 48	0.06192	REST 561	0.05585	3359	0.06041	1121	0.06697	REST 561	0.06910
3312	0.06191	3313	0.04665	3261	0.05803	1123	0.06331	3262	0.05634
3262	0.05102	3312	0.04442	REST 561	0.05761	3251	0.04916	3252	0.04546
REST 561	0.04613	REST 48	0.04408	3312	0.04263	2211	0.03607	2211	0.03531
3311	0.04069	2211	0.03862	3329	0.03791	3371	0.03446	3251	0.03384
3336	0.03775	3255	0.03792	3314	0.03663	3111	0.03313	3241	0.02801
3359	0.02656	3241	0.03589	REST 48	0.03405	REST 48	0.03182	53	0.02626
2211	0.02628	2122	0.03288	3353	0.03364	3241	0.03098	REST 48	0.02438
3241	0.02539	54	0.03171	3251	0.03056	1122	0.02848	54	0.02290
3252	0.02533	3251	0.02705	3252	0.02954	1111	0.02710	3222	0.02267
3362	0.02503	3332	0.02262	2211	0.02929	2111	0.02202	3132	0.02220
53	0.02424	53	0.02115	54	0.02543	53	0.02102	2111	0.01805
3251	0.02359	3211	0.02107	53	0.02482	1129	0.01876	3255	0.01674
3328	0.02220	2111	0.02027	3313	0.02298	54	0.01703	1121	0.01419

Table 8

Cross Multipliers

Row code	2122	Row code	REST 48	Row code	5224	Row code	5232	Row code	2221
2122	1.00000	REST 48	1.00000	5224	1.00000	5232	1.00000	2221	1.00000
K nFS	0.09061	K nFS	0.13264	K nFS	0.11249	K nFS	0.15336	K nFS	0.09416
H API S10	0.00786	H API S10	0.03994	H API S10	0.01838	K NPIsSH	0.01406	H API S10	0.02963
E FS PAI	0.00703	L w&s S10	0.02959	H UI S10	0.01193	H API S10	0.01300	L w&s S10	0.02377
L GMI S10	0.00599	H UI S10	0.02558	L w&s S10	0.01011	E FS PAI	0.01043	H UI S10	0.01898
K FS	0.00544	H API S9	0.02109	H API S9	0.00971	H UI S10	0.00865	H API S9	0.01565
H UI S10	0.00526	H API S8	0.01789	H API S8	0.00823	L GMI S10	0.00858	H API S8	0.01327
E FS UI	0.00453	L w&s S9	0.01562	E FS PAI	0.00798	K FS	0.00808	L w&s S9	0.01255
H API S9	0.00415	H API S7	0.01560	H API S7	0.00718	H API S9	0.00687	H API S7	0.01158
H API S8	0.00352	H UI S9	0.01351	L GMI S10	0.00664	E FS UI	0.00672	L w&s S8	0.01065
L w&s S10	0.00327	L w&s S8	0.01325	H UI S9	0.00630	H API S8	0.00583	H UI S9	0.01002
L GMI S9	0.00316	H API S6	0.01242	K FS	0.00618	H API S7	0.00508	L w&s S7	0.00929
H API S7	0.00307	L w&s S7	0.01156	H API S6	0.00572	H UI S9	0.00457	H API S6	0.00922
H UI S9	0.00278	H UI S8	0.01146	K NPIsSH	0.00554	L GMI S9	0.00453	H UI S8	0.00850
L GMI S8	0.00268	H UI S7	0.00999	H UI S8	0.00534	H API S6	0.00405	H UI S7	0.00742
H API S6	0.00244	H API S5	0.00987	L w&s S9	0.00534	H UI S8	0.00387	L w&s S6	0.00739
H UI S8	0.00235	K NPIsSH	0.00987	E FS UI	0.00514	L GMI S8	0.00384	H API S5	0.00732
L GMI S7	0.00234	L w&s S6	0.00920	H UI S7	0.00466	H UI S7	0.00338	E FS PAI	0.00693
Row code	55	Row code	3241	Row code	9318	Row code	3113	Row code	3118
55	1.00000	3241	1.00000	9318	1.00000	3113	1.00000	3118	1.00000
K nFS	0.20802	K nFS	0.02114	L w&s S10	0.10822	K nFS	0.06776	K nFS	0.10905
H API S10	0.03138	H API S10	0.00450	H API S10	0.10012	H API S10	0.01678	H API S10	0.02048
H UI S10	0.02039	H UI S10	0.00290	H UI S10	0.06310	L w&s S10	0.01160	H UI S10	0.01323
K NPIsSH	0.02030	L w&s S10	0.00267	L w&s S9	0.05715	H UI S10	0.01078	L w&s S10	0.01146
H API S9	0.01657	H API S9	0.00237	H API S9	0.05287	H API S9	0.00886	H API S9	0.01082
E FS PAI	0.01406	K NPIsSH	0.00221	L w&s S8	0.04848	H API S8	0.00751	K NPIsSH	0.00962
H API S8	0.01405	H API S8	0.00201	H API S8	0.04485	H API S7	0.00655	H API S8	0.00917
L w&s S10	0.01360	H API S7	0.00176	L w&s S7	0.04228	L w&s S9	0.00613	H API S7	0.00800
H API S7	0.01226	H UI S9	0.00153	H API S7	0.03912	H UI S9	0.00569	E FS PAI	0.00744
L GMI S10	0.01155	E FS PAI	0.00142	L w&s S6	0.03367	H API S6	0.00522	H UI S9	0.00699
K FS	0.01089	L w&s S9	0.00141	H UI S9	0.03332	L w&s S8	0.00520	H API S6	0.00637
H UI S9	0.01077	H API S6	0.00140	H API S6	0.03115	H UI S8	0.00483	L GMI S10	0.00613
H API S6	0.00976	H UI S8	0.00130	H UI S8	0.02827	E FS PAI	0.00473	L w&s S9	0.00605
H UI S8	0.00913	L w&s S8	0.00120	L w&s S5	0.02675	L w&s S7	0.00453	H UI S8	0.00593
E FS UI	0.00907	L GMI S10	0.00116	H API S5	0.02474	K NPIsSH	0.00439	K FS	0.00577
H UI S7	0.00796	H UI S7	0.00113	H UI S7	0.02465	H UI S7	0.00421	H UI S7	0.00517
H API S5	0.00775	H API S5	0.00111	H DI S10	0.02172	H API S5	0.00415	L w&s S8	0.00513
Row code	3361	Row code	3362	Row code	3363	Row code	3161	Row code	3162
3361	1.00000	3362	1.00000	3363	1.00000	3161	1.00000	3162	1.00000
K nFS	0.06078	K nFS	0.04820	K nFS	0.03167	K nFS	0.03822	K nFS	0.06144
H API S10	0.00783	H API S10	0.01851	H API S10	0.00962	H API S10	0.01083	H API S10	0.02741
H UI S10	0.00512	L w&s S10	0.01466	L w&s S10	0.00729	L w&s S10	0.00760	L w&s S10	0.02305
K NPIsSH	0.00489	H UI S10	0.01181	H UI S10	0.00616	H UI S10	0.00694	H UI S10	0.01747
E FS PAI	0.00418	H API S9	0.00977	H API S9	0.00508	H API S9	0.00572	H API S9	0.01448
H API S9	0.00414	H API S8	0.00829	H API S8	0.00431	H API S8	0.00485	H API S8	0.01228
H API S8	0.00351	L w&s S9	0.00774	L w&s S9	0.00385	H API S7	0.00423	L w&s S9	0.01217

Table 8 continued

Row code	2122	Row code	REST 48	Row code	5224	Row code	5232	Row code	2221
L GMI S10	0.00345	H API S7	0.00723	H API S7	0.00376	L w&s S9	0.00401	H API S7	0.01071
K FS	0.00324	L w&s S8	0.00657	L w&s S8	0.00327	K NPIsSH	0.00382	L w&s S8	0.01032
H API S7	0.00306	H UI S9	0.00624	H UI S9	0.00325	H UI S9	0.00366	H UI S9	0.00922
L w&s S10	0.00287	H API S6	0.00576	H API S6	0.00299	L w&s S8	0.00340	L w&s S7	0.00900
H UI S9	0.00270	L w&s S7	0.00573	L w&s S7	0.00285	H API S6	0.00337	H API S6	0.00853
E FS UI	0.00270	H UI S8	0.00529	H UI S8	0.00276	H UI S8	0.00311	H UI S8	0.00782
H API S6	0.00244	H UI S7	0.00461	H UI S7	0.00241	L w&s S7	0.00297	L w&s S6	0.00717
H UI S8	0.00229	H API S5	0.00457	H API S5	0.00238	H UI S7	0.00271	H UI S7	0.00682
H UI S7	0.00200	L w&s S6	0.00456	L w&s S6	0.00227	H API S5	0.00268	H API S5	0.00677
H API S5	0.00194	K NPIsSH	0.00411	E FS PAI	0.00223	E FS PAI	0.00258	H DI S10	0.00595

Table 9

Cyclical Multipliers

Row code	2122	Row code	REST 48	Row code	5224	Row code	5232	Row code	2221
53	0.00444	53	0.02161	53	0.01008	53	0.00731	53	0.01604
REST 48	0.00199	3241	0.00752	REST 48	0.00451	REST 48	0.00327	REST 48	0.00717
3241	0.00155	3116	0.00719	3241	0.00351	3241	0.00254	3241	0.00558
3116	0.00148	43-46	0.00674	3116	0.00335	3116	0.00243	3116	0.00534
43-46	0.00138	51	0.00616	43-46	0.00314	43-46	0.00228	43-46	0.00500
51	0.00127	3118	0.00611	51	0.00287	51	0.00208	51	0.00457
3118	0.00126	3361	0.00568	3118	0.00285	3118	0.00207	3118	0.00454
3361	0.00117	3121	0.00554	3361	0.00265	3361	0.00192	3361	0.00421
3121	0.00114	3363	0.00518	3121	0.00258	3121	0.00187	3121	0.00411
3363	0.00106	72	0.00501	3363	0.00242	3363	0.00175	3363	0.00384
72	0.00103	3251	0.00445	72	0.00234	72	0.00169	72	0.00372
3251	0.00091	2111	0.00403	3251	0.00207	3251	0.00150	3251	0.00330
2111	0.00083	REST 81	0.00384	2111	0.00188	2111	0.00136	2111	0.00299
REST 81	0.00079	REST 561	0.00357	REST 81	0.00179	REST 81	0.00130	REST 81	0.00285
REST 561	0.00073	2211	0.00329	REST 561	0.00167	REST 561	0.00121	REST 561	0.00265
2211	0.00068	5221	0.00319	2211	0.00154	2211	0.00111	2211	0.00244
5221	0.00066	3115	0.00299	5221	0.00149	5221	0.00108	5221	0.00237
3115	0.00062	3254	0.00284	3115	0.00140	3115	0.00101	3115	0.00222
Row code	55	Row code	3241	Row code	9318	Row code	3113	Row code	3118
53	0.01723	53	0.00245	53	0.05332	53	0.00911	53	0.01118
REST 48	0.00770	REST 48	0.00109	REST 48	0.02385	REST 48	0.00407	REST 48	0.00500
3241	0.00600	3116	0.00081	3241	0.01856	3241	0.00317	3241	0.00389
3116	0.00573	43-46	0.00076	3116	0.01774	3116	0.00303	3116	0.00372
43-46	0.00537	51	0.00070	43-46	0.01662	43-46	0.00284	43-46	0.00349
51	0.00491	3118	0.00069	51	0.01520	51	0.00260	51	0.00319
3118	0.00487	3361	0.00064	3118	0.01508	3118	0.00258	3361	0.00294
3361	0.00452	3121	0.00063	3361	0.01400	3361	0.00239	3121	0.00287
3121	0.00442	3363	0.00059	3121	0.01367	3121	0.00234	3363	0.00268
3363	0.00413	72	0.00057	3363	0.01278	3363	0.00218	72	0.00259
72	0.00399	3251	0.00050	72	0.01236	72	0.00211	3251	0.00230
3251	0.00355	2111	0.00046	3251	0.01097	3251	0.00187	2111	0.00209
2111	0.00322	REST 81	0.00043	2111	0.00995	2111	0.00170	REST 81	0.00199
REST 81	0.00306	REST 561	0.00040	REST 81	0.00947	REST 81	0.00162	REST 561	0.00185

Table 9 continued

Row code	2122	Row code	REST 48	Row code	5224	Row code	5232	Row code	2221
REST 561	0.00285	2211	0.00037	REST 561	0.00881	REST 561	0.00150	2211	0.00170
2211	0.00263	5221	0.00036	2211	0.00813	2211	0.00139	5221	0.00165
5221	0.00254	3115	0.00034	5221	0.00787	5221	0.00135	3115	0.00155
3115	0.00239	3254	0.00032	3115	0.00739	3115	0.00126	3254	0.00147
Row code	3361	Row code	3362	Row code	3363	Row code	3161	Row code	3162
53	0.00432	53	0.00998	53	0.00520	53	0.00586	53	0.01476
REST 48	0.00193	REST 48	0.00446	REST 48	0.00233	REST 48	0.00262	REST 48	0.00660
3241	0.00150	3241	0.00347	3241	0.00181	3241	0.00204	3241	0.00514
3116	0.00144	3116	0.00332	3116	0.00173	3116	0.00195	3116	0.00491
43-46	0.00135	43-46	0.00311	43-46	0.00162	43-46	0.00183	43-46	0.00460
51	0.00123	51	0.00284	51	0.00148	51	0.00167	51	0.00421
3118	0.00122	3118	0.00282	3118	0.00147	3118	0.00166	3118	0.00417
3121	0.00111	3361	0.00262	3361	0.00137	3361	0.00154	3361	0.00388
3363	0.00104	3121	0.00256	3121	0.00133	3121	0.00150	3121	0.00378
72	0.00100	3363	0.00239	72	0.00121	3363	0.00141	3363	0.00354
3251	0.00089	72	0.00231	3251	0.00107	72	0.00136	72	0.00342
2111	0.00081	3251	0.00205	2111	0.00097	3251	0.00121	3251	0.00304
REST 81	0.00077	2111	0.00186	REST 81	0.00092	2111	0.00109	2111	0.00276
REST 561	0.00071	REST 81	0.00177	REST 561	0.00086	REST 81	0.00104	REST 81	0.00262
2211	0.00066	REST 561	0.00165	2211	0.00079	REST 561	0.00097	REST 561	0.00244
5221	0.00064	2211	0.00152	5221	0.00077	2211	0.00089	2211	0.00225
3115	0.00060	5221	0.00147	3115	0.00072	5221	0.00087	5221	0.00218
3254	0.00057	3115	0.00138	3254	0.00068	3115	0.00081	3115	0.00205

The maximum cross impacts are 0.10905 (capital of nFS), 0.02048 (rental of property of households 10 + mw), 0.01146 and 0.00605 (households with wage, salaries and contributions and mixed income of 10 + mw).

The maximum cyclical impacts are 0.01118 (53, real estate and rental and leasing), 0.00500 (rest 48, transportation except pipeline), 0.00389 (3241, petroleum and coal products manufacturing), and 0.00372 (3116, animal slaughtering and processing).

Economic activities representative of traditional Mexico are leather and hide tanning and finishing (3161) and footwear manufacturing (3162). This first strongly impacts to activity of animal slaughtering and processing (3116, 0.40348), wholesale trade & retail trade (43-46, 0.18958), and administrative and support services (the rest of the sub-sector 561, 0.10090).

The economic-institutional inter-sectorial relations of this activity are with non-financial companies (0.03822), rental of property (0.01083) and wages, salaries, and contributions (0.00760) of 10 + mw households.

Close the cycle the multipliers that impact to activities: real estate and rental and leasing (0.00586), transportation except pipeline (0.00262), petroleum and coal products manufacturing (0.00204), and animal slaughtering and processing (0.00195).

The second activity, footwear manufacturing, close relation to first activity (3161, 0.26009), wholesale trade & retail trade (0.18872) and animal slaughtering and processing (0.08535). The maximum cross impacts are 0.06144 (capital of non-financial companies), 0.02741 and 0.02305 (rental of property and wages, salaries and contributions households with income of 10 + mw).

And cyclical multipliers: 0.01476, 0.00660, and 0.00514 for real estate and rental and leasing, transportation except pipeline and petroleum and coal products manufacturing respectively.

The activities of leather and hide tanning and finishing and footwear manufacturing are key sectors, while animal slaughtering and processing is strategic sector. Wholesale trade & retail trade is leading sector and administrative and support services is independent sector.

Analysis and Discussion

With regard to poverty alleviation, Minzer and Solis (2014) concluded that increasing the value added tax including drugs from 15% to 16% of households in the first quintile of income in the agricultural sector are the most affected. It is followed by the food industry and transport services. In this analysis it is also these quintiles but also in economic activities (specifically): services related to animal breeding and production and services related to forestry, grinding grains and obtaining seeds and oils and fats, slaughter, meat packing and processing of livestock, poultry and other edible animals tourism, freight transport, etcetera. Also, successful development activities such as sugar, chocolates, and sweets, and similar direct impact on other activities such as trade, growing vegetables, and manufacture of glass and glass products. Households are dedicated to this activity using (traditional) artisanal methods which are not as successful as households with incomes above 8 minimum wages.

Gaspar Núnez (2008) believed that the SAMs are perfectible because of the inaccuracy of the database. Although only disaggregated level branch of economic activity some sectors, the RAS method introduces errors increasingly moving away from the base year. In Mexico there are only input-output matrices official for the years 1975, 1980, 2003, and 2008 obtained from surveys. But if the RAS method is adjusted each year of iteration using information from surveys, this can improve outcomes, i.e., to explain aspects of the national economy. In this paper the latter applies.

Some improvements to this paper are to introduce the breakdown in men and women with or without skills as Kim (2008) did. Currently, the databases in this area have improved methodologies in Mexico.

Because the information obtained is extensive, authors can provide the full results of the industry groups and factors disaggregated to anyone who requests it in order that the data and results can be discussed.

Conclusion

Industries either representative of modern or traditional, competitive or lagged Mexico, are not significantly contributed to the household of 9 and 10 mw income either mixed income or wages, salaries and contributions. It is much less to households with income of 1-5 mw.

Strategic sectors as metal ore mining, petroleum and coal products manufacturing, and bakeries and tortilla manufacturing affect mainly in the capital of non-financial companies, domestic liabilities of rental of property and income of 10 + mw of household.

After affecting institutional sectors, the leading sectors as transport (except pipeline, manufacturing of motor vehicle, motor vehicle body and trailer and motor vehicle parts) these affect on real estate and rental and leasing, and transportation (except pipeline and petroleum and manufacturing of coal products). This explains that households with income under 5 mw do not receive profit of labor and energetic reforms or the arrival of new OEMs.

The financial sector (leading sector) is divorced of micro-companies and personal business. This sector affects to activity of management of companies and enterprises and professional, scientific, and technical services (non-traditional and low speed Mexico, households with income between 1-5 mw).

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