



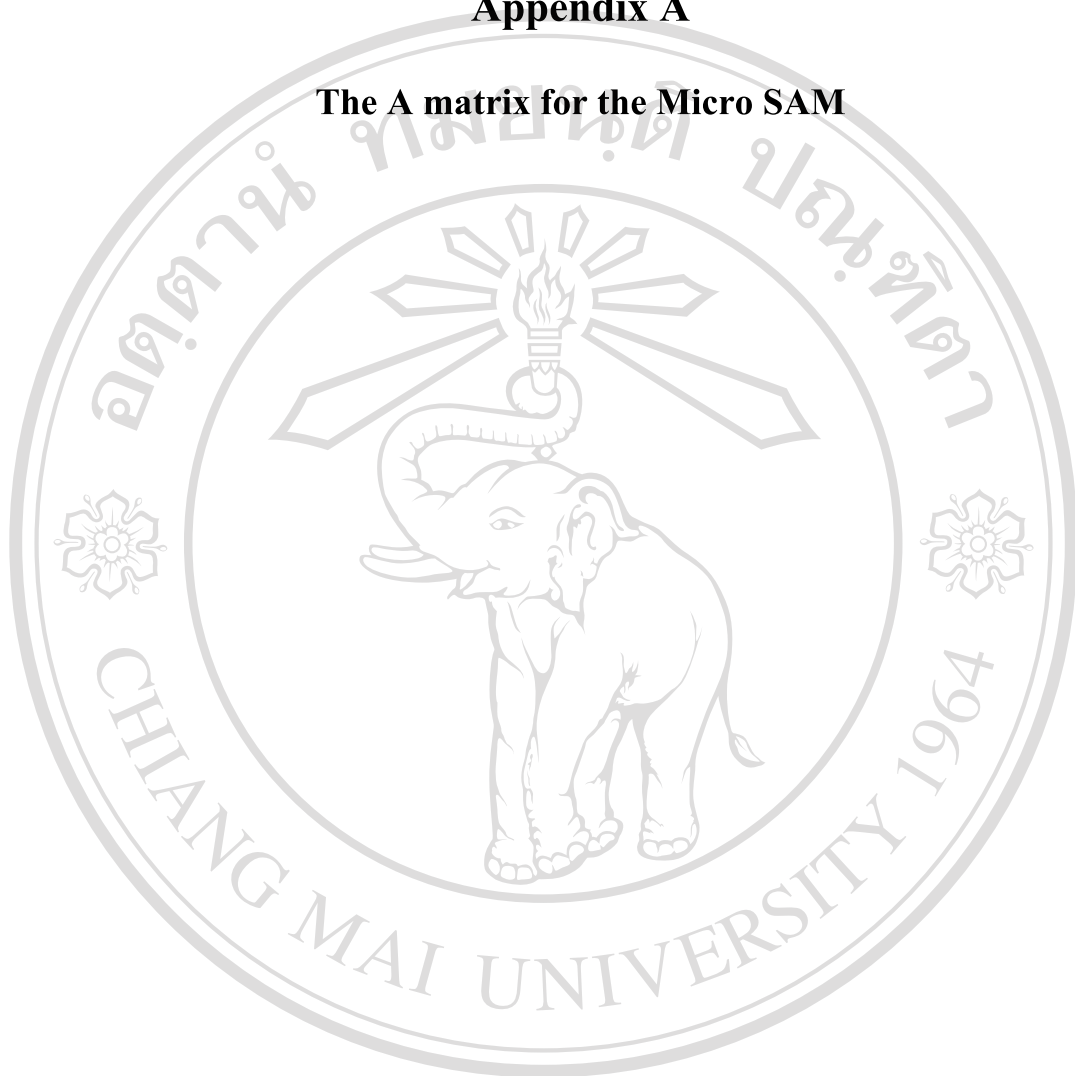
**APPENDIX**

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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## Appendix A

### The A matrix for the Micro SAM



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### Appendix A the A matrix for the Micro SAM

Sectors	1	2	3	4	5	6	7	8
Grain Crops	0.069	-	-	-	-	-	0.001	0.078
Beans	-	0.077	-	-	-	-	0.000	0.007
Oil bearing Crops	-	-	0.072	-	-	-	0.000	0.003
Sugar Crops	-	-	-	0.076	-	-	0.000	0.011
Tobacco	-	-	-	-	0.076	-	0.000	0.027
Other Farming	-	-	-	-	-	0.075	0.001	0.067
Forestry	0.002	0.002	0.002	0.002	0.002	0.002	0.100	0.006
Animal husbandry	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033
Fisher	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000
Extension services	0.009	0.010	0.009	0.010	0.010	0.010	0.005	0.007
Coal mining and processing	0.003	0.004	0.003	0.004	0.004	0.004	0.001	0.003
petroleum and natural gas extraction	-	-	-	-	-	-	-	-
metal and non-metal mining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
food and tobacco processing	0.004	0.004	0.004	0.004	0.004	0.004	0.000	0.090
Textiles and apparel	0.000	0.001	0.000	0.001	0.001	0.001	0.003	0.000
Timber and furniture	0.004	0.005	0.004	0.005	0.005	0.004	0.001	0.001
papermaking	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.000
oil refining	0.007	0.008	0.007	0.008	0.008	0.007	0.003	0.002
coking	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000
fertilizer	0.135	0.037	0.095	0.048	0.046	0.059	0.039	0.001
pesticides	0.016	0.004	0.011	0.006	0.005	0.007	0.013	0.000
other chemicals	0.010	0.011	0.011	0.011	0.011	0.011	0.006	0.009
metal and non-metal manufacturing	0.009	0.010	0.009	0.009	0.009	0.009	0.008	0.003
equipment	0.006	0.007	0.006	0.006	0.007	0.006	0.008	0.002
machinery	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Electronics, instruments, and office equipment	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
other manufacturing	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
waster	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000
electricity and heat	0.008	0.009	0.009	0.009	0.009	0.009	0.002	0.003
gas	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000
water	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.000



**Appendix A (continued)**

<b>Sectors</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
Grain Crops	0.029	0.017	-	-	-	0.051	0.005	0.000
Beans	0.003	0.002	-	-	-	0.005	0.001	0.000
Oil bearing Crops	0.001	0.001	-	-	-	0.002	0.000	0.000
Sugar Crops	0.004	0.002	-	-	-	0.007	0.001	0.000
Tobacco	0.010	0.006	-	-	-	0.018	0.002	0.000
Other Farming	0.025	0.014	-	-	-	0.044	0.005	0.000
Forestry	0.000	0.007	0.019	-	0.021	0.000	0.002	0.139
Animal husbandry	-	0.004	-	-	-	0.003	0.014	-
Fisher	0.007	0.003	-	-	-	0.001	-	-
Extension services	0.017	0.017	-	-	-	0.000	0.000	-
Coal mining and processing	0.000	0.000	0.123	-	0.013	0.002	0.001	0.002
petroleum and natural gas extraction	-	-	0.000	-	-	0.000	-	0.000
metal and non-metal mining	0.000	-	0.002	-	0.070	0.000	0.000	0.000
food and tobacco processing	0.076	0.002	-	-	0.000	0.062	0.001	0.000
Textiles and apparel	0.004	0.001	0.019	0.004	0.005	0.003	0.086	0.005
Timber and furniture	0.001	0.001	0.001	0.001	0.003	0.000	0.000	0.086
papermaking	0.001	0.019	0.002	0.003	0.002	0.018	0.002	0.005
oil refining	0.002	0.008	0.031	0.015	0.027	0.001	0.002	0.003
coking	-	-	0.001	-	0.008	0.000	0.000	0.000
fertilizer	0.000	0.002	-	-	0.000	0.001	-	0.000
pesticides	-	0.001	-	-	-	0.000	-	0.000
other chemicals	0.012	0.011	0.011	0.008	0.055	0.018	0.009	0.048
metal and non-metal manufacturing	0.002	0.025	0.047	0.047	0.092	0.008	0.003	0.051
equipment	0.008	0.059	0.036	0.099	0.040	0.007	0.001	0.009
machinery	0.000	0.010	0.018	0.066	0.029	0.004	0.001	0.001
Electronics, instruments, and office equipment	-	0.002	0.002	0.005	0.003	0.002	0.000	0.001
other manufacturing	0.000	0.011	0.006	0.001	0.002	0.001	0.000	0.001
waster	0.010	-	0.000	-	0.000	0.001	-	0.001
electricity and heat	0.007	0.008	0.024	0.022	0.083	0.007	0.006	0.036
gas	-	0.001	-	0.022	0.000	0.000	-	0.001
water	0.000	0.002	0.004	0.001	0.003	0.001	0.001	0.003



**Appendix A (continued)**

Sectors	17	18	19	20	21	22	23	24
Grain Crops	-	0.000	0.000	-	0.024	0.014	0.000	-
Beans	-	0.000	0.000	-	0.002	0.001	0.000	-
Oil bearing Crops	-	0.000	0.000	-	0.001	0.001	0.000	-
Sugar Crops	-	0.000	0.000	-	0.003	0.002	0.000	-
Tobacco	-	0.000	0.000	-	0.008	0.005	0.000	-
Other Farming	-	0.000	0.000	-	0.021	0.012	0.000	-
Forestry	0.001	0.000	-	0.000	-	0.023	0.000	0.000
Animal husbandry	-	-	0.000	-	-	0.001	-	-
Fisher	-	-	-	-	-	-	-	-
Extension services	-	0.000	-	-	-	0.000	-	-
Coal mining and processing	0.005	0.000	0.223	0.036	0.000	0.006	0.034	0.001
petroleum and natural gas extraction	-	-	-	0.001	0.000	0.000	0.000	-
metal and non-metal mining	0.000	0.000	0.000	0.066	0.000	0.026	0.131	0.000
food and tobacco processing	0.001	0.000	0.000	0.000	0.001	0.008	0.000	0.000
Textiles and apparel	0.005	0.000	0.000	0.013	0.001	0.003	0.003	0.001
Timber and furniture	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000
papermaking	0.143	0.000	0.000	0.001	0.008	0.009	0.004	0.002
oil refining	0.002	0.001	0.001	0.004	0.001	0.006	0.013	0.003
coking	0.000	0.000	-	0.051	-	0.004	0.015	0.001
fertilizer	-	-	-	0.178	0.000	0.001	0.000	0.000
pesticides	0.000	-	-	-	0.045	0.000	0.000	0.000
other chemicals	0.052	0.000	0.006	0.098	0.034	0.166	0.017	0.012
metal and non-metal manufacturing	0.014	0.000	0.007	0.013	0.003	0.014	0.152	0.127
equipment	0.008	0.000	0.027	0.015	0.001	0.009	0.021	0.127
machinery	0.004	0.000	0.003	0.006	0.000	0.003	0.005	0.018
Electronics, instruments, and office equipment	0.002	0.000	0.005	0.005	0.000	0.002	0.002	0.003
other manufacturing	0.001	0.000	0.000	0.003	0.000	0.001	0.002	0.001
waster	0.056	-	-	0.006	-	0.011	0.011	0.003
electricity and heat	0.019	0.000	0.014	0.124	0.013	0.061	0.064	0.009
gas	0.000	-	-	-	-	0.000	0.000	0.000
water	0.002	0.000	0.001	0.003	0.001	0.002	0.002	0.002





**Appendix A (continued)**

Sectors	25	26	27	28	29	30	31	32
Grain Crops	-	-	0.002	-	-	-	-	-
Beans	-	-	0.000	-	-	-	-	-
Oil bearing Crops	-	-	0.000	-	-	-	-	-
Sugar Crops	-	-	0.000	-	-	-	-	-
Tobacco	-	-	0.001	-	-	-	-	-
Other Farming	-	-	0.001	-	-	-	-	-
Forestry	0.000	-	0.000	-	-	-	-	0.005
Animal husbandry	-	-	0.016	-	-	-	-	-
Fisher	-	-	-	-	-	-	-	-
Extension services	-	-	-	-	-	-	-	-
Coal mining and processing	0.000	0.000	0.000	-	0.064	0.122	0.000	0.014
petroleum and natural gas extraction	-	-	-	-	0.000	0.013	-	-
metal and non-metal mining	0.000	0.000	-	-	-	0.000	-	0.037
food and tobacco processing	0.000	0.000	0.006	-	-	0.030	-	-
Textiles and apparel	0.001	0.001	0.003	-	0.004	0.003	0.002	0.003
Timber and furniture	0.001	0.000	0.012	-	0.002	0.001	0.000	0.008
papermaking	0.004	0.006	0.002	-	0.003	0.001	0.004	0.008
oil refining	0.003	0.002	0.001	-	0.006	0.001	0.009	0.041
coking	0.001	0.000	0.000	-	0.000	-	-	0.003
fertilizer	-	-	-	-	-	-	-	-
pesticides	-	-	-	-	-	-	-	-
other chemicals	0.032	0.013	0.011	-	0.003	0.002	0.055	0.028
metal and non-metal manufacturing	0.151	0.035	0.132	-	0.015	0.003	0.059	0.393
equipment	0.010	0.002	0.001	-	0.019	0.009	0.136	0.042
machinery	0.060	0.006	0.000	-	0.014	0.002	0.010	0.015
Electronics, instruments, and office equipment	0.007	0.082	0.001	-	0.009	0.002	0.007	0.005
other manufacturing	0.000	0.000	0.002	-	0.001	0.000	0.001	0.004
waster	0.001	0.000	0.016	-	0.000	-	-	-
electricity and heat	0.009	0.002	0.009	-	0.201	0.004	0.138	0.004
gas	0.000	0.000	-	-	-	0.116	-	-
water	0.001	0.001	0.002	-	0.004	0.001	0.020	0.001



**Appendix A (continued)**

Sectors	33	34	35	36	37	38	39	40
Grain Crops	0.000	-	0.000	0.019	-	0.001	-	0.000
Beans	0.000	-	0.000	0.002	-	0.000	-	0.000
Oil bearing Crops	0.000	-	0.000	0.001	-	0.000	-	0.000
Sugar Crops	0.000	-	0.000	0.003	-	0.000	-	0.000
Tobacco	0.000	-	0.000	0.007	-	0.000	-	0.000
Other Farming	0.000	-	0.000	0.016	-	0.000	-	0.000
Forestry	0.000	-	-	0.001	-	0.000	-	-
Animal husbandry	-	-	0.000	0.015	-	0.000	-	0.001
Fisher	-	-	-	0.033	-	0.000	-	0.000
Extension services	-	-	-	0.001	-	-	-	0.000
Coal mining and processing	0.000	0.000	0.000	0.002	-	0.000	-	0.000
petroleum and natural gas extraction	-	-	-	-	-	-	-	-
metal and non-metal mining	0.000	-	-	0.000	-	0.000	0.000	0.000
food and tobacco processing	0.010	-	0.002	0.165	-	0.053	0.002	0.004
Textiles and apparel	0.002	0.004	0.010	0.012	0.004	0.002	0.003	0.003
Timber and furniture	0.001	0.003	0.005	0.003	0.003	0.002	0.005	0.008
papermaking	0.003	0.022	0.012	0.005	0.031	0.004	0.033	0.024
oil refining	0.214	0.035	0.008	0.009	0.006	0.012	0.019	0.006
coking	0.000	-	-	0.000	-	0.000	-	-
fertilizer	0.000	-	-	-	-	0.001	-	0.000
pesticides	0.000	-	-	-	-	0.001	-	0.000
other chemicals	0.021	0.003	0.017	0.011	0.004	0.004	0.035	0.050
metal and non-metal manufacturing	0.005	0.005	0.005	0.003	0.001	0.001	0.016	0.010
equipment	0.076	0.013	0.010	0.005	0.004	0.002	0.031	0.011
machinery	0.003	0.001	0.005	0.003	0.001	0.000	0.007	0.008
Electronics, instruments, and office equipment	0.001	0.004	0.006	0.002	0.002	0.001	0.027	0.026
other manufacturing	0.000	-	0.000	0.002	0.000	0.000	0.001	0.001
waster	0.000	-	-	-	-	-	-	-
electricity and heat	0.009	0.009	0.006	0.017	0.005	0.005	0.030	0.012
gas	0.000	0.000	-	0.013	-	0.000	-	0.000
water	0.002	0.005	0.001	0.003	0.002	0.000	0.005	0.002



**Appendix A (continued)**

Sectors	41	VA-L.AG	VA-L.OR	VA-L.U	VA-K	RH1	RH2	RH3
Grain Crops	-	-	-	-	-	0.112	0.103	0.096
Beans	-	-	-	-	-	0.010	0.010	0.009
Oil bearing Crops	-	-	-	-	-	0.004	0.004	0.004
Sugar Crops	-	-	-	-	-	0.015	0.014	0.013
Tobacco	-	-	-	-	-	0.039	0.036	0.033
Other Farming	-	-	-	-	-	0.096	0.089	0.083
Forestry	-	-	-	-	-	0.015	0.013	0.013
Animal husbandry	-	-	-	-	-	0.113	0.105	0.098
Fisher	-	-	-	-	-	0.013	0.012	0.011
Extension services	-	-	-	-	-	-	-	-
Coal mining and processing	-	-	-	-	-	0.006	0.006	0.006
petroleum and natural gas extraction	-	-	-	-	-	-	-	-
metal and non-metal mining	-	-	-	-	-	0.003	0.003	0.003
food and tobacco processing	-	-	-	-	-	0.175	0.173	0.172
Textiles and apparel	0.000	-	-	-	-	0.032	0.032	0.032
Timber and furniture	0.006	-	-	-	-	0.028	0.028	0.027
papermaking	0.077	-	-	-	-	0.007	0.007	0.007
oil refining	0.028	-	-	-	-	0.001	0.001	0.001
coking	-	-	-	-	-	-	-	-
fertilizer	-	-	-	-	-	-	-	-
pesticides	-	-	-	-	-	-	-	-
other chemicals	0.009	-	-	-	-	0.045	0.044	0.044
metal and non-metal manufacturing	0.008	-	-	-	-	0.042	0.042	0.042
equipment	0.031	-	-	-	-	0.010	0.010	0.010
machinery	0.010	-	-	-	-	0.007	0.007	0.007
Electronics, instruments, and office equipment	0.006	-	-	-	-	0.034	0.034	0.034
other manufacturing	0.001	-	-	-	-	0.002	0.002	0.002
waster	-	-	-	-	-	-	-	-
electricity and heat	0.019	-	-	-	-	0.011	0.010	0.010
gas	-	-	-	-	-	0.000	0.000	0.000









**Appendix A (continued)**

Sectors	UH7	Enterprise	Gov-L	Gov-E	Gov-C	CAP	ROMC	ROW
Grain Crops	0.016	-	-	-	-	0.018	0.011	0.021
Beans	0.001	-	-	-	-	0.002	0.000	0.014
Oil bearing Crops	0.001	-	-	-	-	0.001	0.000	0.000
Sugar Crops	0.002	-	-	-	-	0.002	0.002	0.001
Tobacco	0.006	-	-	-	-	0.006	0.004	0.002
Other Farming	0.014	-	-	-	-	0.016	0.004	0.095
Forestry	0.002	-	-	-	-	0.027	0.002	0.001
Animal husbandry	0.009	-	-	-	-	0.166	0.000	0.000
Fisher	0.006	-	-	-	-	0.000	0.000	0.000
Extension services	-	-	0.056	-	0.026	-	0.000	0.000
Coal mining and processing	0.002	-	-	-	-	0.011	0.000	0.000
petroleum and natural gas extraction	-	-	-	-	-	0.000	-	-
metal and non-metal mining	-	-	-	-	-	0.033	0.001	0.001
food and tobacco processing	0.136	-	-	-	-	0.019	0.525	0.452
Textiles and apparel	0.045	-	-	-	-	0.003	-	0.022
Timber and furniture	0.007	-	-	-	-	0.021	0.003	0.035
papermaking	0.016	-	-	-	-	0.001	0.004	0.002
oil refining	0.002	-	-	-	-	0.000	0.000	0.000
coking	-	-	-	-	-	0.006	0.000	0.000
fertilizer	0.002	-	-	-	-	0.004	0.002	0.117
pesticides	0.000	-	-	-	-	0.000	-	0.003
other chemicals	0.011	-	-	-	-	0.021	0.003	0.401
metal and non-metal manufacturing	0.006	-	-	-	-	0.003	0.058	0.406
equipment	0.008	-	-	-	-	0.062	0.010	0.052
machinery	0.005	-	-	-	-	0.002	0.003	0.069
Electronics, instruments, and office equipment	0.017	-	-	-	-	0.001	0.004	0.002
other manufacturing	0.003	-	-	-	-	0.002	0.000	0.029
waster	-	-	-	-	-	-	-	-
electricity and heat	0.016	-	-	-	-	-	0.023	0.012
gas	0.006	-	-	-	-	0.000	-	-



## Curriculum Vitae

**Name** Mr. Ma Ji

**Date of Birth** 29, July, 1975

### Educational Background

- Master Candidate for Economics in Chiang Mai University, Thailand;
- Bachelor for Economics in Yunnan Nationalities University, PRC

### Scholarship (if any)

- Research fellowship from Berkeley Economic Advising and Research, LLC, U.S

### Working experience

- Assistant Researcher for Yunnan Academy of Social Sciences(YASS);
- Research Analyst for Berkeley Economic Advising and Research, LLC, U.S (2008-2009);
- Ex-Technique Consultant of ActionAid International China Programme Office (2006);
- Ex-Project Officer for Winrock International Yunnan Project Office (2005);

### Publications (if any)

- 2005, Yunnan Province Labor Migration Report, Yunnan University Express
- 2005, Yunnan Province Coal Mine Disaster Report, Yunnan University Express
- 2003-2004, Yunnan Insurance development report , Yunnan University Express

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