

**Table S1.** Ripple effects in Gifu prefecture (unit: million JPY).

Sector	Positive Effects of the Construction (one time)	Operations (annual)	Negative Effects of the Operations (annual)
Agricultural products	2.87	1.51	-1.09
Livestock raising and sericulture	0.79	0.52	-0.38
Agricultural services	0.55	0.32	-0.24
Forestry	0.46	51.48	-0.12
Fishing	0.00	0.00	-0.00
Mining	2.96	1.28	-9.77
Food	8.10	5.39	-3.78
Textiles	1.16	1.20	-0.40
Pulp, paper, and wooden products	12.07	512.31	-2.04
Chemical products	1.40	3.47	-0.56
Petroleum and coal products	1.08	0.87	-0.79
Ceramic, stone, and clay products	21.95	3.68	-2.29
Steel and steel products	2.43	0.95	-0.26
Non-steel metals and products	0.23	0.08	-0.05
Other metal products	19.56	3.83	-2.20
General machinery	2.27	0.98	-0.58
Electric machinery	1.48	0.39	-0.37
Information and communication electronics devices	1.17	0.54	-0.43
Electronic component	0.78	0.41	-0.38
Transportation equipment	2.39	1.56	-1.33
Precision instruments	0.38	0.24	-0.13
Other manufactured products	6.53	7.11	-3.48
Construction	607.86	18.36	-54.42
Electricity and gas	19.74	29.49	-834.70
City water, thermal energy supply, and others	7.59	5.42	-6.01
Commerce	383.53	257.95	-32.37
Financial and insurance	62.60	48.26	-49.18
Real estate	86.89	56.76	-45.56
Transport	107.64	128.56	-30.83
Communication and broadcasting	26.13	17.51	-16.83
Public services	2.98	2.01	-1.47
Education and research	10.71	10.04	-31.13
Medical and health service	14.43	9.12	-6.74
Other non-profit organizations	6.53	4.30	-3.96
Other business services	74.54	46.95	-54.99
Other personal services	41.38	26.10	-19.31
Office supplies	2.90	2.34	-1.12
Unclassified	7.29	5.06	-3.69
<b>Total</b>	<b>1,553.34</b>	<b>1,266.35</b>	<b>-1222.97</b>

**Table S2.** Ripple effects for areas outside Gifu prefecture (unit: million JPY).

Sector	Positive Effects of Construction (one time)	Operations (annual)	Negative Effects of the Operations (annual)
Agricultural products	0.45	0.28	-0.21
Livestock raising and sericulture	0.06	0.04	-0.03
Agricultural services	0.00	0.00	0.00
Forestry	0.02	0.01	-0.01
Fishing	0.16	0.10	-0.08
Mining	-0.01	0.00	0.00
Food	16.68	10.54	-7.79
Textiles	1.79	1.13	-0.83
Pulp, paper, and wooden products	0.06	28.22	-0.03
Chemical products	1.59	1.01	-0.74
Petroleum and coal products	6.42	4.05	-3.00
Ceramic, stone, and clay products	0.12	0.08	-0.06
Steel and steel products	-0.04	-0.02	0.02
Non-steel metals and products	0.08	0.05	-0.04
Other metal products	0.15	0.10	-0.07
General machinery	1680.71	0.03	-0.02
Electric machinery	1.45	0.91	-0.68
Information and communication electronics devices	1.42	0.89	-0.66
Electronic component	0.10	0.07	-0.05
Transportation equipment	5.26	3.32	-2.46
Precision instruments	0.53	0.33	-0.25
Other manufactured products	1.62	1.02	-0.76
Construction	0.00	0.00	0.00
Electricity and gas	0.24	0.15	-39.73
City water, thermal energy supply, and others	0.00	50.25	0.00
Commerce	157.75	23.24	-9.64
Financial and insurance	1.54	0.97	-0.72
Real estate	2.14	1.35	-1.00
Transport	7.31	11.01	-1.16
Communication and broadcasting	4.15	2.62	-1.94
Public services	0.00	0.00	0.00
Education and research	0.42	0.27	-0.20
Medical and health service	0.02	0.01	-0.01
Other non-profit organizations	0.03	0.02	-0.01
Other business services	1.74	1.10	-0.81
Other personal services	4.87	3.07	-2.27
Office supplies	0.00	0.00	0.00
Unclassified	0.00	0.00	0.00
Total	1,898.84	146.23	-75.23