Supplementary Material

Regional differences in beef cattle trade and movements associated with the COVID-19 pandemic in Australia

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Supplementary Information

Results of the systematic literature review

Table S1. Boolean search strings for journal article selection

Boolean search string	Reported # articles Scopus
(Beef OR cattle) AND (COVID AND Australia)	4
(Beef OR meat) AND (COVID AND Australia)	16
(Beef OR meat OR cattle) AND (COVID AND Australia)	17
(Meat AND supply AND chains) AND (COVID AND Australia)	3
(Beef OR food AND supply AND chains) AND (COVID AND Australia)	15
(Beef OR supply AND chains) AND (COVID AND Australia)	68
(Beef OR food) AND (COVID AND Australia)	141
(Animal AND movement) AND (COVID AND Australia)	6
(Meat OR food) AND (COVID AND Australia)	146
(Animal AND movement AND farm) AND (COVID AND Australia)	0

Trends of cattle processor and retail price in Australia during pre-COVID and COVID periods
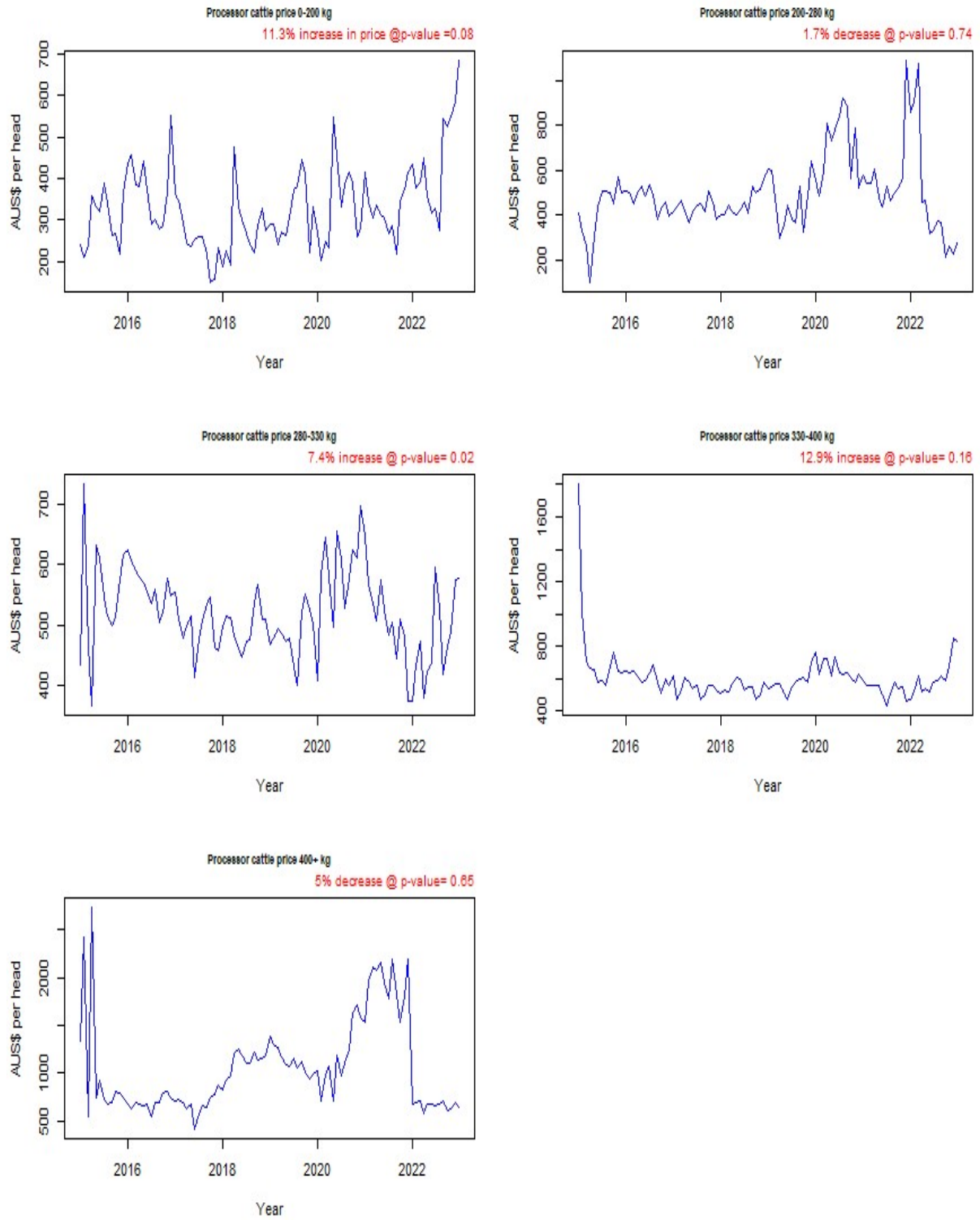

Figure S1. Trends of processor cattle price in Australia during pre-COVID and COVID periods
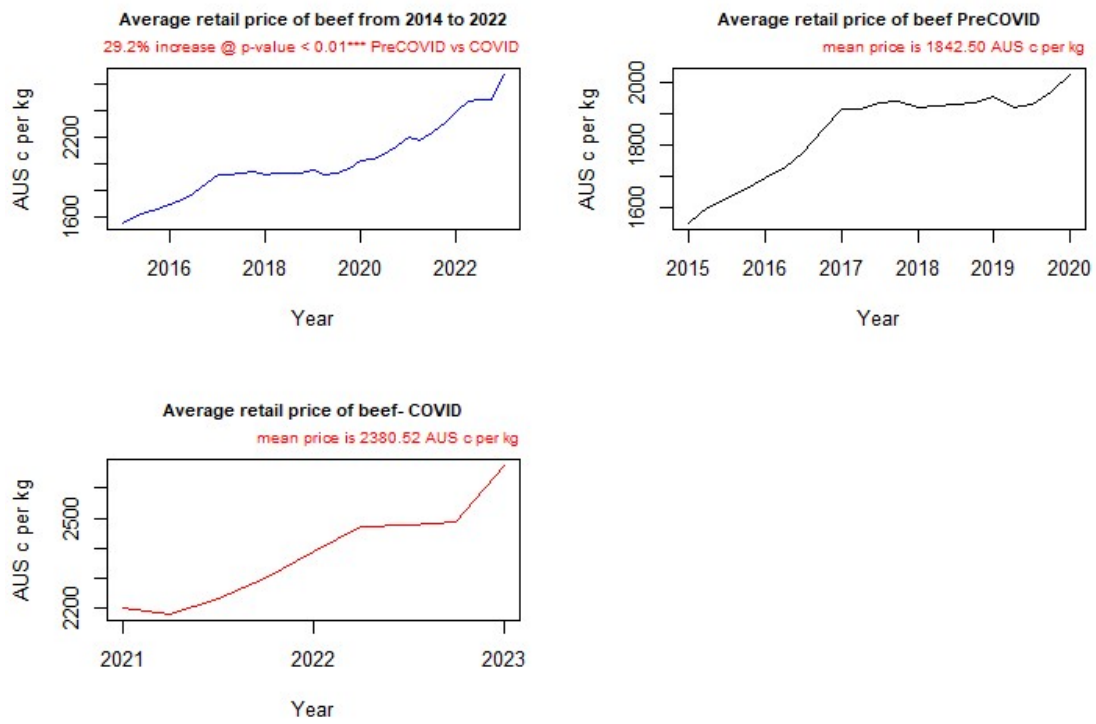
Figure S2. Trends of beef retail price in Australia during pre-COVID and COVID periods

Results of the interstate/territory analyses

Table S2. Interstate/territory analysis for cattle inflows onto farms during pre-COVID and COVID periods

Beef cattle purchased (Average farm level)							
	NSW	*NT*	*QLD*	*SA*	*TAS*	*VIC*	*WA*
t	-1.9	0.3	-0.1	1.5	-1.9	-0.9	3.3
df	33.0	33.6	70.0	27.5	5.8	29.2	28.7
p-value	0.05	0.78	0.93	0.15	0.09	0.37	<0.01
$\mu_{(pre\text{-}COVID)\,(\%)}$; $\mu_{(COVID)\,(\%)}$	7.9; 11.5	4.1; 3.5	4.8; 5.0	16.9; 8.3	4.9; 6.3	14.9; 22.8	5.3; 1.5

Beef cattle transferred onto (Average farm level)							
t	-0.8	-3.3	-1.9	1.3	0.3	-1.2	-1.6
df	24.2	15.9	41.2	29.7	4.9	16.4	19.2
p-value	0.39	0.01	0.06	0.02	0.75	0.23	0.12
$\mu_{(pre\text{-}COVID)\,(\%)}$; $\mu_{(COVID)\,(\%)}$	0.2; 0.6	2.0; 15.6	2.0; 5.0	2.8; 0.9	0.7; 0.6	0.2; 0.7	0.3; 2.6

There was no inflow data for ACT.
df is the degree of freedom
μ is the mean

Table S3. Interstate/territory analysis for cattle outflows from farms during pre-COVID and COVID periods

	Beef cattle sold (Average farm level)						
	NSW	NT	QLD	SA	TAS	VIC	WA
t	0.1	-1.3	0.6	-0.2	0.7	-1.3	1.2
df	30.4	21.4	64.6	19.1	5.9	23.1	43.0
p-value	0.93	0.19	0.57	0.85	0.51	0.22	0.22
$\mu_{\text{(pre-COVID) (%)}}$; $\mu_{\text{(COVID) (%)}}$	49.1; 48.6	23.9; 29.7	32.0; 30.4	51.0; 53.5	47.9; 44.9	50.9; 60.1	39.8; 34.7

	Beef cattle transferred off (Average farm level)						
t	-0.8	-1.8	-0.5	-0.9	1.0	-1.0	-0.9
df	37.4	18.8	60.7	16.7	6.2	15.0	22.3
p-value	0.45	0.08	0.61	0.38	0.36	0.33	0.36
$\mu_{\text{(pre-COVID) (%)}}$; $\mu_{\text{(COVID) (%)}}$	0.3; 0.5	6.7; 18.3	4.1; 4.9	1.9; 4.5	0.6; 0.2	0; 0.2	1.7; 3.4

There was no outflow data for ACT.
df is the degree of freedom
μ is the mean

Table S4. Quarterly cattle slaughter across Australia during pre-COVID and COVID periods

	Quarterly cattle slaughtered (excluding calves)					
	NSW	QLD	SA	TAS	VIC	WA
t	7.40	7.12	8.34	2.36	4.13	1.55
df	25.92	28.63	29.55	20.90	26.20	13.60
p-value	<0.01	<0.01	<0.01	0.03	<0.01	0.14
$\mu_{(pre\text{-}COVID)}$ ('000); $\mu_{(COVID)}$ ('000)	446; 332	943; 740	88; 40	55; 51	408; 324	102; 95

There was no slaughter data for the NT and ACT.
df is the degree of freedom
μ is the mean

Results of the impact of confounding factors

Table S5. Confounding factors impacting the number of cattle sold.

		NSW		NT		QLD		SA		TAS		VIC		WA	
		FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS
Intercept	β	109.38	108.94	2701.3	2701.33	531.15	531.15	102.42	102.42	160.44	160.44	42.78	42.78	930.98	930.98
	SE	4.502	4.60	253.8	253.84	14.03	14.03	26.45	26.45	5.15	5.15	1.31	1.31	41.09	41.09
	t value	24.293	23.71	10.64	10.64	37.86	37.86	3.87	3.87	31.17	31.17	32.78	32.78	22.66	22.66
	p-value	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Herd size	β	234.62	233.74	11193.3	11193.31	3600.52	3600.52	622.31	622.31	23.61	23.61	181.25	181.25	8697.80	897.80
	SE	37.87	38.24	1552.7	1552.68	128.00	127.99	185.46	185.46	18.66	18.66	7.85	7.85	287.28	287.28
	t value	6.20	6.11	7.21	7.21	28.13	28.13	3.36	3.36	1.27	1.27	23.08	23.08	30.28	30.27
	p-value	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.33	0.33	<0.01	<0.01	<0.01	<0.01
Rainfall - linear	β	-72.52	-72.88	-118.2	-118.20	-61.84	-61.84	-41.35	-41.35	43.88	43.88	1.78	1.78	-327.69	-327.69
	SE	48.38	48.91	1678.5	1678.54	189.03	189.03	185.99	185.99	18.24	18.24	8.18	8.18	291.71	291.71
	t value	-1.50	-1.49	-0.07	-0.07	-0.33	-0.33	-0.22	-0.22	2.41	2.41	0.22	0.22	-1.12	-1.12
	p-value	0.14	0.14	0.94	0.94	0.75	0.75	0.83	0.83	0.14	0.14	0.83	0.83	0.27	0.29
Rainfall - quadratic	β	-8.53	-9.51	1228.6	1228.62	209.01	209.01	-2.36	-2.36	33.35	33.35	2.08	2.08	71.21	71.21
	SE	44.23	44.86	1639.1	1639.06	133.93	133.93	159.58	159.58	20.50	20.50	8.72	8.18	279.71	279.71
	t value	-0.19	-0.21	0.75	0.75	1.56	1.56	-0.02	-0.01	1.63	1.63	0.24	0.22	0.26	0.25
	p-value	0.85	0.83	0.46	0.46	0.12	0.12	0.99	0.99	0.25	0.25	0.81	0.81	0.80	0.80
Rainfall - cubic	β	-62.50	-62.19	-937.2	-937.18	-57.34	-57.34	-34.93	-34.93	12.14	12.14	3.19	3.19	57.86	57.86
	SE	38.77	39.06	1542.6	1542.64	128.93	128.93	179.11	179.11	22.39	22.39	8.14	8.14	286.72	286.72
	t value	-1.61	-1.59	-0.61	-0.61	-0.45	-0.44	-0.20	-0.19	0.54	2.61	0.39	0.39	0.20	0.20
	p-value	0.11	0.12	0.55	0.55	0.66	0.66	0.85	0.85	0.64	0.12	0.70	0.70	0.84	0.84
Export ban	β	27.54	27.04	1805.9	1805.86	288.63	288.63	208.41	208.41	60.77	60.76	13.39	13.39	-157.58	-157.58
	SE	51.52	52.06	1882.4	1882.45	172.41	172.41	187.59	187.59	23.27	23.27	9.28	9.28	325.31	325.31
	t value	0.53	0.52	0.96	0.96	1.67	1.67	1.11	1.11	2.61	2.61	1.44	1.44	-0.48	-0.48
	p-value	0.60	0.61	0.35	0.35	0.09	0.09	0.28	0.28	0.12	0.12	0.16	0.16	0.63	0.63
Era	β	-67.20	-66.59	-1339.1	-1339.13	-242.34	-242.34	147.40	147.40	-30.40	-30.40	4.66	4.66	98.99	98.99
	SE	60.53	61.00	1931.2	1931.25	226.99	226.99	206.19	206.19	29.03	29.03	10.64	10.64	336.73	336.73
	t value	-1.11	-1.09	-0.69	-0.69	-1.07	-1.07	0.72	0.71	-1.05	-1.05	0.44	0.44	0.29	0.29
	p-value	0.27	0.28	0.49	0.49	0.28	0.29	0.48	0.48	0.40	0.40	0.66	0.66	0.77	0.77
R²		0.57	0.56	0.66	526.28	0.94	0.94	0.39	0.39	0.91	0.91	0.95	0.94	0.96	0.96
AIC		528.81	460.85	638.03	0.66	901.23	824.58	475.21	394.92	77.27	32.96	258.56	220.61	641.81	554.18

FLS is the Flexible Least Square model   FGLS is the Flexible Generalised Least Square model; β is the estimated coefficient; SE is the standard error; AIC is the Akaike Information Criterion

7

Table S6. Confounding factors impacting the number of cattle purchased.

		NSW		NT		QLD		SA		TAS		VIC		WA	
		FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS
Intercept	β	30.55	20.63	226.53	226.53	43.28	43.28	9.94	9.94	18.56	18.56	8.64	8.64	22.67	22.67
	SE	1.66	1.69	46.25	46.25	3.70	3.69	2.21	2.21	1.06	1.06	1.30	1.30	3.17	3.17
	t value	12.42	12.24	4.89	4.89	11.70	11.70	4.50	4.50	17.57	17.57	6.64	6.63	7.16	7.16
	p-value	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Herd size	β	37.78	38.09	127.70	127.69	53.41	53.40	29.05	29.05	-1.02	-1.02	0.43	0.43	155.83	155.82
	SE	13.92	14.03	282.90	282.90	33.74	33.74	15.48	15.48	3.83	3.83	7.83	7.83	22.15	22.14
	t value	2.71	2.72	0.45	0.45	1.58	1.58	1.88	1.88	-0.27	-0.27	0.06	0.05	7.04	7.04
	p-value	<0.01	<0.01	0.66	0.66	0.12	0.12	0.07	0.07	0.81	0.81	0.96	0.96	<0.01	<0.01
Rainfall - linear	β	10.80	10.30	63.75	63.75	-71.64	-71.64	-18.89	-18.89	0.76	0.76	-3.76	-3.76	-1.63	-1.63
	SE	17.78	17.94	305.84	305.84	49.82	49.82	15.52	15.52	3.74	3.74	8.16	8.16	22.49	22.49
	t value	0.61	-3.77	0.21	0.21	-1.44	-1.44	-1.22	-1.22	0.20	0.20	-0.46	-0.46	-0.07	-0.07
	p-value	0.55	0.57	0.84	0.84	0.16	0.16	0.23	0.23	0.86	0.86	0.65	0.64	0.94	0.94
Rainfall - quadratic	β	-2.89	-3.77	-213.09	-213.09	57.21	57.21	-10.94	-10.94	4.64	4.64	6.37	6.37	-18.06	-18.06
	SE	16.25	16.46	298.64	298.64	35.29	35.29	13.32	13.32	4.21	4.21	8.70	8.70	21.56	21.56
	t value	-0.18	-0.23	-0.71	-0.71	1.62	1.62	-0.82	-0.82	1.10	1.10	0.73	0.73	-0.84	-0.84
	p-value	0.86	0.82	0.48	0.48	0.11	0.11	0.41	0.42	0.39	0.39	0.47	0.47	0.41	0.41
Rainfall - cubic	β	-1.25	-1.09	-94.16	-94.16	19.51	19.51	-4.03	-4.03	0.59	0.59	-6.16	-6.16	27.47	27.47
	SE	14.25	14.33	281.07	281.07	33.98	33.98	14.95	14.95	4.59	4.59	8.12	8.12	22.10	22.10
	t value	-0.09	-0.08	-0.33	-0.33	0.57	0.57	-0.27	-0.27	0.13	0.13	-0.76	-0.76	1.24	1.24
	p-value	0.93	0.94	0.74	0.74	0.57	0.57	0.79	0.79	0.91	0.91	0.45	0.45	0.22	0.22
Export ban	β	6.57	5.78	40.48	40.48	-46.98	-46.98	-21.35	-21.35	3.39	3.39	-5.88	-5.88	12.40	12.40
	SE	18.94	19.10	342.99	342.99	45.44	45.44	15.66	15.66	4.78	4.78	9.26	9.26	25.08	25.08
	t value	0.35	0.30	0.12	0.12	-1.03	-1.03	-1.36	-1.36	0.71	0.71	-0.64	-0.64	0.49	0.49
	p-value	0.73	0.76	0.91	0.91	0.31	0.31	0.18	0.18	0.55	0.55	0.53	0.53	0.62	0.62
Era	β	23.90	24.34	-151.42	-151.42	114.07	114.07	43.11	43.10	7.37	7.37	14.49	14.49	-26.14	-26.14
	SE	22.25	22.38	351.88	351.88	59.83	59.83	17.21	17.21	5.96	5.96	10.62	10.62	25.96	25.95
	t value	1.07	1.09	-0.43	-0.43	1.91	1.91	2.51	2.50	1.24	1.24	1.37	1.36	-1.01	-1.01
	p-value	0.29	0.28	0.67	0.67	0.06	0.06	0.02	0.02	0.34	0.34	0.18	0.18	0.32	0.32
R^2		0.28	0.27	0.05	0.05	0.18	0.18	0.35	0.35	0.77	0.77	0.07	0.07	0.61	0.61
AIC		422.71	370.59	515.44	427.53	709.21	651.23	296.41	250.88	48.77	26.63	258.39	220.48	411.16	359.41

FLS is the Flexible Least Square model   FGLS is the Flexible Generalised Least Square model; β is the estimated coefficient; SE is the standard error; AIC is the Akaike Information Criterion

Table S7. Confounding factors impacting the number of cattle transferred off farms.

		NSW		NT		QLD		SA		TAS		VIC		WA	
		FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS	FLS	FGLS
Intercept	β	0.96	0.98	2357.3	2357.28	176.92	175.92	13.33	13.33	1.44	1.44	0.03	0.03	315.80	315.80
	SE	0.27	0.27	479.8	479.76	18.07	18.07	5.73	5.73	0.29	0.29	0.03	0.03	94.68	94.68
	t value	3.61	3.61	4.91	4.91	9.79	9.79	2.33	2.33	5.04	5.03	0.97	0.97	3.34	3.34
	p-value	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.03	0.04	0.04	0.34	0.34	<0.01	<0.01
Herd size	β	0.53	0.62	19186.0	19185.97	2367.13	2367.13	117.94	117.94	-4.70	-4.70	-0.12	-0.12	4111.94	4111.94
	SE	2.24	2.26	2934.5	2934.52	164.81	164.81	40.19	40.19	1.04	1.04	0.17	0.17	661.96	661.96
	t value	0.24	0.27	6.54	6.54	14.36	14.36	2.93	2.93	-4.52	-4.51	-0.673	-0.67	6.21	6.21
	p-value	0.81	0.79	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	0.05	0.51	0.51	<0.01	<0.01
Rainfall - linear	β	1.37	1.29	-8167.3	-8167.32	121.22	121.22	1.88	1.88	1.51	1.51	-0.20	-0.19	-231.25	-231.25
	SE	2.86	2.89	3172.4	3172.38	243.38	243.38	40.31	40.31	1.02	1.02	0.18	0.18	672.17	672.17
	t value	0.48	0.45	-2.58	-2.57	0.49	0.49	0.05	0.05	1.48	1.48	-1.09	-1.09	-0.34	-0.34
	p-value	0.63	0.66	0.02	0.02	0.62	0.62	0.96	0.96	0.28	0.28	0.29	0.28	0.73	0.73
Rainfall - quadratic	β	-0.78	-0.92	3014.7	3014.73	-326.59	-326.59	25.05	25.05	-0.11	-0.11	0.21	0.21	526.57	526.57
	SE	2.62	2.65	3097.8	3097.78	172.44	172.44	34.59	34.58	1.14	1.14	0.19	0.19	644.52	644.52
	t value	-0.29	-0.35	0.97	0.97	-1.89	-1.89	0.72	0.72	-0.09	-0.09	1.10	1.10	0.82	0.82
	p-value	0.77	0.73	0.34	0.34	0.06	0.06	0.47	0.47	0.93	0.93	0.28	0.28	0.42	0.42
Rainfall - cubic	β	1.54	1.56	-1282.3	-1282.28	200.77	200.77	-23.29	-23.29	-0.16	-0.16	-0.19	-0.19	-330.91	-330.91
	SE	2.29	2.31	2915.5	2915.54	166.00	166.00	38.82	38.82	1.25	1.25	0.18	0.18	660.69	660.69
	t value	0.67	0.68	-0.44	-0.44	1.21	1.21	-0.60	-0.60	-0.13	-0.13	-1.08	-1.08	-0.50	-0.50
	p-value	0.51	0.59	0.66	0.66	0.23	0.23	0.55	0.55	0.91	0.91	0.29	0.29	0.62	0.62
Export ban	β	1.78	1.64	330.0	330.01	218.66	218.66	46.09	46.09	-2.58	-2.58	-0.15	-0.15	715.18	715.18
	SE	3.05	3.08	3557.8	3557.77	221.99	221.99	4066	40.66	1.29	1.29	0.20	0.20	749.59	749.59
	t value	0.59	0.53	0.09	0.09	0.99	0.99	1.13	1.13	-1.99	-1.99	-0.75	-0.75	0.95	0.95
	p-value	0.56	0.59	0.93	0.93	0.33	0.33	0.27	0.27	0.18	0.18	0.46	0.46	0.44	0.35
Era	β	0.93	1.03	3757.0	3757.00	35.73	35.73	10.85	10.85	1.16	1.16	0.13	0.13	610.91	610.91
	SE	3.58	3.60	3650.0	3649.99	292.27	292.27	44.69	44.69	1.62	1.62	0.23	0.23	775.92	775.92
	t value	0.26	0.29	1.03	1.03	0.12	0.12	0.24	0.24	0.72	0.72	0.54	0.54	0.79	0.79
	p-value	0.79	0.78	0.31	0.32	0.90	0.90	0.81	0.81	0.55	0.55	0.60	0.60	0.44	0.44
R²		0.06	0.06	0.62	0.62	078	0.78	0.30	0.30	0.96	0.96	0.12	0.12	0.55	0.55
AIC		229.19	206.23	683.86	563.20	937.63	857.44	365.12	306.23	25.30	21.41	16.52	9.95	716.94	617.63

FLS is the Flexible Least Square model   FGLS is the Flexible Generalised Least Square model; β is the estimated coefficient; SE is the standard error; AIC is the Akaike Information Criterion

Table S8. Confounding factors impacting the number of cattle transferred off farms.

		NSW		NT		QLD		SA		TAS		VIC		WA	
		FLS	*FGLS*	*FLS*	*FGLS*	*FLS*	*FGLS*	*FLS*	*FGLS*	*FLS*	*FGLS*	*FLS*	*FGLS*	*FLS*	*FGLS*
Intercept	β	0.73	0.73	1049.1	1049.08	73.50	73.50	8.47	8.47	2.11	2.11	0.28	0.28	174.00	174.00
	SE	0.43	0.42	172.7	172.74	15.46	15.46	3.52	3.52	0.36	0.36	0.12	0.12	82.56	82.56
	t value	1.72	1.72	6.07	6.07	4.76	4.76	2.41	2.41	5.87	5.87	2.30	2.30	2.11	2.11
	p-value	0.09	0.09	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04
Herd size	β	-0.64	-0.64	6702.1	6702.13	336.47	336.47	92.45	92.45	-4.55	-4.55	1.64	1.64	2258.47	2258.47
	SE	3.54	3.54	1056.6	1056.59	141.01	141.01	24.65	24.65	1.30	1.30	0.73	0.73	577.21	577.21
	t value	-0.18	-0.18	6.34	6.34	2.38	2.39	3.75	3.75	-3.49	-3.49	2.26	2.26	3.91	3.91
	p-value	0.86	0.86	<0.01	<0.01	0.02	0.02	<0.01	<0.01	0.07	0.07	0.03	0.03	<0.01	<0.01
Rainfall - linear	β	-198	-1.98	-3397.0	-3396.98	-288.52	-288.52	21.84	21.84	-0.48	-0.48	-0.40	-0.40	-367.38	-367.38
	SE	4.52	4.52	1142.2	1142.24	208.23	208.23	24.72	24.72	1.27	1.27	0.76	0.76	586.11	586.11
	t value	-0.44	-0.44	-2.97	-2.97	-1.39	-1.39	0.88	0.88	-0.38	-0.38	-0.53	-0.53	-0.63	-0.63
	p-value	0.66	0.66	<0.01	<0.01	0.17	0.17	0.38	0.38	0.74	0.74	0.60	0.60	0.53	0.53
Rainfall - quadratic	β	3.82	3.83	224.6	224.59	132.53	132.53	12.22	12.22	0.23	0.23	-0.63	-0.63	541.76	541.76
	SE	4.15	4.15	1115.4	1115.38	147.54	147.54	21.21	21.21	1.43	1.43	0.81	0.81	562.00	561.99
	t value	0.92	0.92	0.20	0.20	0.89	0.89	0.58	0.58	0.16	0.16	-0.78	-0.78	0.96	0.96
	p-value	0.36	0.36	0.84	0.84	0.37	0.37	0.57	0.57	0.89	0.89	0.44	0.44	0.34	0.34
Rainfall - cubic	β	-3.02	-3.01	-397.2	-397.19	65.17	65.17	1.48	1.48	1.59	1.59	0.49	0.49	-260.02	-260.02
	SE	3.61	3.61	1049.8	1049.76	142.03	142.03	23.81	23.81	1.56	1.56	0.75	0.75	576.10	576.09
	t value	-0.84	-0.84	-0.38	-0.38	0.46	0.46	0.06	0.06	1.01	1.01	0.65	0.65	-0.45	-0.45
	p-value	0.41	0.41	0.71	0.71	0.65	0.65	0.95	0.95	0.42	0.42	0.52	0.52	0.65	0.65
Export ban	β	-1.33	-1.33	1153.3	1153.29	-133.06	-133.06	17.37	17.37	-1.81	-1.81	-0.77	-0.77	767.20	767.19
	SE	4.81	4.81	1281.0	1281.01	189.93	189.93	24.94	24.94	1.62	1.62	0.86	0.86	653.62	653.62
	t value	-0.28	-0.28	0.90	0.90	-0.70	-0.70	0.69	0.69	-1.12	-1.12	-0.90	-0.89	1.174	1.17
	p-value	0.78	0.78	0.38	0.38	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.25	0.25
Era	β	-2.33	-2.33	3547.9	3547.93	344.22	344.22	-42.80	-42.80	3.84	3.84	-0.35	-0.35	690.11	690.11
	SE	5.64	5.64	1314.2	1314.21	250.06	250.06	27.41	27.41	2.03	2.03	0.98	0.98	676.57	676.57
	t value	-0.41	-0.41	2.7	2.70	1.38	1.38	-1.56	-1.56	1.89	1.89	-0.35	-0.35	1.02	1.02
	p-value	0.68	0.68	0.01	0.01	0.17	0.17	0.13	0.12	0.19	0.19	0.73	0.73	0.31	0.31
R²		0.08	0.08	0.65	0.65	0.16	0.16	0.39	0.39	0.89	0.89	0.21	0.21	0.38	0.38
AIC		276.46	246.57	610.32	503.96	915.16	837.17	329.92	277.88	29.36	22.31	87.19	82.56	704.61	607.21

FLS is the Flexible Least Square model   FGLS is the Flexible Generalised Least Square model; β is the estimated coefficient; SE is the standard error; AIC is the Akaike Information Criterion