

Supplementary material: Country analysis: Ratio of revenues vs cost of dismantling for focal car parts

Table S1. Ratio of revenues versus cost of dismantling end of life vehicle components. Numbers in green indicate economic benefit, red no economic gain. *Germany.*

<i>components</i>	<i>car segment</i>	<i>ratio revenue/cost</i>	<i>ratio revenue/cost (50% higher scrap prices)</i>
1) Heating blower	Off-road vehicle Large	0.35	0.52
	Large-capacity limousine	1.20	1.80
	Leisure activity vehicle	1.22	1.83
	Very small vehicle	0.32	0.48
	Minivan	0.45	0.67
	Lower mid-range vehicle II	0.80	1.19
2) Servomotor	Very small vehicle	0.35	0.53
	Small vehicle	0.26	0.38
	Minivan	0.08	0.12
	Lower mid-range vehicle	0.19	0.29
3) Starter	Large-capacity limousine	0.38	0.56
	Leisure activity vehicle	0.57	0.85
	Very small vehicle	0.63	0.95
	Minivan	0.64	0.96
	Lower mid-range vehicle	0.56	0.84
4) Fan motor	Mini vehicle	0.57	0.86
	Minivan	0.52	0.78
5) Generators	Large-capacity limousine	0.74	1.11
	Leisure activity vehicle	1.00	1.50
	Very small vehicle	0.78	1.17
	Minivan	1.00	1.51
	Lower mid-range vehicle	1.07	1.60
6) Wiper Motor	Off-road vehicle Great	0.37	0.55
	Large-capacity limousine	0.35	0.53
	Small vehicle	0.24	0.35
	Minivan	0.28	0.42
7) Engine control & Transmission control	Large-capacity limousine	0.50	0.74
	Very small vehicle	0.26	0.38
	Small vehicle	0.32	0.48
	Minivan	0.95	1.43
	Lower mid-range vehicle	0.63	0.95
	Lower mid-range vehicle II	2.18	3.27
	Off-road vehicle Large	1.18	1.77
	Off-road vehicle Medium	0.94	1.42
	Very small vehicle	0.47	0.70
	Off-road vehicle Great	0.81	1.22
8) Drive control	Large-capacity limousine	0.31	0.46
	Very small vehicle	0.52	0.78
	Small vehicle	0.36	0.55
	Minivan	0.62	0.94
	Lower mid-range vehicle II	0.47	0.71
9) Infotainment	Off-road vehicle Large	0.98	1.47
	Lower mid-range vehicle	0.45	0.68
10) Chassis control	Off-road vehicle Large	0.10	0.14
	Large-capacity limousine	0.95	1.43
11) CD charger	Off-road vehicle Large	0.19	0.28

TV turner	Off-road vehicle Large	0.26	0.39
Radio control	Off-road vehicle Large	0.12	0.18
12) Inverter	Off-road vehicle Large	1.54	2.30
13) Start/Stop motor	Lower mid-range vehicle	0.69	1.03
	Lower mid-range vehicle II	1.39	2.08
14) Side assistant	Lower mid-range vehicle II	3.23	4.85
15) Distance sensor	Lower mid-range vehicle II	1.93	2.89
16) Near-distance radar	Lower mid-range vehicle II	1.53	2.29
17) Oxygen sensor	Off-road vehicle Large	3.66	5.46
	Off-road vehicle Large (Hybrid)	3.66	5.46
	Executive Car	2.67	4.00
	Lower mid-range vehicle	6.39	9.57
	Large-capacity limousine	2.46	3.68
	Minivan	4.22	6.31
	Off-road vehicle Medium	2.29	3.40
18) Servomotor gear	Small vehicle	2.84	4.24
	Very small vehicle	0.46	0.69
	Very small vehicle	0.43	0.64

Table S2. Ratio of revenues versus cost of dismantling end of life vehicle components. Numbers in green indicate economic benefit, red no economic gain. *The Netherlands.*

components	car segment	ratio revenue/cost (Prices Oct. 2019)	ratio revenue/cost (50% higher scrap prices)
1) Heating blower	Off-road vehicle Large	0.35	0.52
	Large-capacity limousine	1.21	1.81
	Leisure activity vehicle	1.23	1.84
	Very small vehicle	0.32	0.48
	Minivan	0.45	0.68
	Lower mid-range vehicle II	0.80	1.20
2) Servomotor	Very small vehicle	0.35	0.53
	Small vehicle	0.26	0.39
	Minivan	0.08	0.13
	Lower mid-range vehicle	0.20	0.29
3) Starter	Large-capacity limousine	0.38	0.57
	Leisure activity vehicle	0.57	0.86
	Very small vehicle	0.63	0.95
	Minivan	0.64	0.96
	Lower mid-range vehicle	0.56	0.84
4) Fan motor	Mini vehicle	0.58	0.87
	Minivan	0.52	0.79
5) Generators	Large-capacity limousine	0.74	1.11
	Leisure activity vehicle	1.00	1.51
	Very small vehicle	0.78	1.17
	Minivan	1.01	1.51
	Lower mid-range vehicle	1.07	1.60
6) Wiper Motor	Off-road vehicle Large	0.37	0.55
	Large-capacity limousine	0.35	0.53
	Small vehicle	0.24	0.36
	Minivan	0.29	0.43
7) Engine control & Transmission control	Large-capacity limousine	0.50	0.74
	Very small vehicle	0.26	0.39
	Small vehicle	0.32	0.48
	Minivan	0.95	1.43
	Lower mid-range vehicle	0.63	0.95

	Lower mid-range vehicle II	2.18	3.28
	Off-road vehicle Large	1.18	1.77
	Off-road vehicle Medium	0.95	1.42
	Very small vehicle	0.47	0.70
8) Drive control	Off-road vehicle Great	0.82	1.23
	Large-capacity limousine	0.31	0.46
	Very small vehicle	0.52	0.78
	Small vehicle	0.36	0.55
	Minivan	0.63	0.94
	Lower mid-range vehicle II	0.47	0.71
9) Infotainment	Off-road vehicle Large	0.98	1.47
	Lower mid-range vehicle	0.45	0.68
10) Chassis control	Off-road vehicle Large	0.10	0.14
	Large-capacity limousine	0.95	1.43
11) CD charger	Off-road vehicle Large	0.19	0.28
	TV tuner	0.26	0.39
	Radio control	0.12	0.19
12) Inverter	Off-road vehicle Large	1.54	2.31
13) Start/Stop motor	Lower mid-range vehicle	0.69	1.04
	Lower mid-range vehicle II	1.39	2.09
14) Side assistant	Lower mid-range vehicle II	3.23	4.85
15) Distance sensor	Lower mid-range vehicle II	1.93	2.89
16) Near-distance radar	Lower mid-range vehicle II	1.53	2.29
17) Oxygen sensor	Off-road vehicle Large	3.66	5.46
	Off-road vehicle Large (Hybrid)	3.66	5.46
	Executive Car	2.67	4.00
	Lower mid-range vehicle	6.39	9.57
	Large-capacity limousine	2.46	3.68
	Minivan	4.22	6.31
	Off-road vehicle Medium	2.29	3.40
	Small vehicle	2.84	4.24
18) Servomotor gear	Very small vehicle	0.46	0.69
	Very small vehicle	0.43	0.64

Table S3. Ratio of revenues versus cost of dismantling end of life vehicle components. Numbers in green indicate economic benefit, red no economic gain. *Finland.*

components	car segment	ratio revenue/cost	
		ratio revenue/cost (50% higher scrap prices)	ratio revenue/cost (60€/t transport cost)
1) Heating blower	Off-road vehicle Large	0.36	0.53
	Large-capacity limousine	1.21	1.82
	Leisure activity vehicle	1.23	1.85
	Very small vehicle	0.33	0.49
	Minivan	0.46	0.69
	Lower mid-range vehicle II	0.81	1.21
2) Servomotor	Very small vehicle	0.36	0.54
	Small vehicle	0.26	0.39
	Minivan	0.09	0.13
	Lower mid-range vehicle	0.20	0.30
3) Starter	Large-capacity limousine	0.39	0.58
	Leisure activity vehicle	0.58	0.87
	Very small vehicle	0.65	0.97
	Minivan	0.65	0.98
	Lower mid-range vehicle	0.57	0.86
4) Fan motor	Mini vehicle	0.59	0.88

	Minivan	0.54	0.80	0.52
5) Generators	Large-capacity limousine	0.75	1.13	0.73
	Leisure activity vehicle	1.02	1.54	0.99
	Very small vehicle	0.80	1.19	0.77
	Minivan	1.03	1.54	0.99
	Lower mid-range vehicle	1.09	1.63	1.04
6) Wiper Motor	Off-road vehicle	0.38	0.56	0.37
	Large-capacity limousine	0.36	0.54	0.35
	Small vehicle	0.24	0.36	0.24
	Minivan	0.29	0.43	0.28
7) Engine control & Transmission control	Large-capacity limousine	0.51	0.76	0.49
	Very small vehicle	0.26	0.40	0.26
	Small vehicle	0.33	0.49	0.32
	Minivan	0.98	1.46	0.95
	Lower mid-range vehicle	0.65	0.98	0.64
	Lower mid-range vehicle II	2.21	3.31	2.05
	Off-road vehicle Large	1.20	1.81	1.16
	Off-road vehicle Medium	0.96	1.44	0.90
	Very small vehicle	0.48	0.72	0.47
8) Drive control	Off-road vehicle Great	0.83	1.25	0.80
	Large-capacity limousine	0.31	0.47	0.31
	Very small vehicle	0.53	0.79	0.51
	Small vehicle	0.37	0.56	0.36
	Minivan	0.64	0.96	0.62
	Lower mid-range vehicle II	0.48	0.72	0.47
9) Infotainment	Off-road vehicle Large	1.00	1.51	0.98
	Lower mid-range vehicle	0.46	0.69	0.45
10) Chassis control	Off-road vehicle Large	0.10	0.15	0.10
	Large-capacity limousine	0.97	1.45	0.92
11) CD charger	Off-road vehicle Large	0.19	0.29	0.19
TV tuner	Off-road vehicle Large	0.27	0.40	0.27
Radio control	Off-road vehicle Large	0.13	0.19	0.13
12) Inverter	Off-road vehicle Large	1.55	2.33	1.44
13) Start/Stop motor	Lower mid-range vehicle	0.70	1.06	0.68
	Lower mid-range vehicle II	1.41	2.11	1.32
14) Side assistant	Lower mid-range vehicle II	3.32	4.97	3.24
15) Distance sensor	Lower mid-range vehicle II	1.98	2.98	1.96
16) Near-distance radar	Lower mid-range vehicle II	1.57	2.36	1.56
17) Oxygen sensor	Off-road vehicle Large	3.78	5.63	3.72
	Off-road vehicle Large (Hybrid)	3.78	5.63	3.72
	Executive Car	2.76	4.12	2.72
	Lower mid-range vehicle	6.58	9.87	6.39
	Large-capacity limousine	2.54	3.80	2.51
	Minivan	4.35	6.51	4.26
	Off-road vehicle Medium	2.36	3.50	2.33
	Small vehicle	2.93	4.38	2.89
18) Servomotor gear	Very small vehicle	0.47	0.70	0.46
	Very small vehicle	0.44	0.65	0.43

Table S4. Ratio of revenues versus cost of dismantling end of life vehicle components. Numbers in green indicate economic benefit, red no economic gain. *Czech Republic.*

components	car segment	ratio revenue/cost	ratio revenue/cost (50% higher scrap prices. 10 €/hour labour cost)*
1) Heating blower	Off-road vehicle Large	0.84	1.26
	Large-capacity limousine	2.91	4.36
	Leisure activity vehicle	2.96	4.43
	Very small vehicle	0.77	1.16
	Minivan	1.10	1.63
	Lower mid-range vehicle II	2.89	2.89
2) Servomotor	Very small vehicle	0.86	1.28
	Small vehicle	0.62	0.93
	Minivan	0.20	0.30
	Lower mid-range vehicle	0.47	0.71
3) Starter	Large-capacity limousine	0.92	1.37
	Leisure activity vehicle	1.38	2.07
	Very small vehicle	1.53	2.29
	Minivan	1.55	2.31
	Lower mid-range vehicle	1.35	2.03
4) Fan motor	Mini vehicle	1.40	2.09
	Minivan	1.26	1.90
5) Generators	Large-capacity limousine	1.79	2.68
	Leisure activity vehicle	2.43	3.64
	Very small vehicle	1.89	2.83
	Minivan	2.43	3.65
	Lower mid-range vehicle	2.58	3.87
6) Wiper Motor	Off-road vehicle Great	0.89	1
	Large-capacity limousine	0.86	1.28
	Small vehicle	0.57	0.86
	Minivan	0.69	1.02
7) Engine control & Transmission control	Large-capacity limousine	1.20	1.80
	Very small vehicle	0.62	0.93
	Small vehicle	0.78	1.16
	Minivan	2.31	3.46
	Lower mid-range vehicle	1.53	2.31
	Lower mid-range vehicle II	5.28	7.93
	Off-road vehicle Large	2.85	4.28
	Off-road vehicle Medium	2.30	3.43
	Very small vehicle	1.14	1.70
	Off-road vehicle Great	1.98	2.96
8) Drive control	Large-capacity limousine	0.74	1.11
	Very small vehicle	1.26	1.88
	Small vehicle	0.89	1.32
	Minivan	1.52	2.27
	Lower mid-range vehicle II	1.14	1.71
	Off-road vehicle Large	2.37	3.56
9) Infotainment	Lower mid-range vehicle	1.10	1.64
	Off-road vehicle Large	2.37	3.56
10) Chassis control	Off-road vehicle Large	0.23	0.35
	Large-capacity limousine	2.31	3.45
11) CD charger	Off-road vehicle Large	0.45	0.67
	TV tuner	0.63	0.94
	Radio control	0.30	0.45
12) Inverter	Off-road vehicle Large	3.72	5.58

13) Start/Stop motor	Lower mid-range vehicle	1.67	2.50
	Lower mid-range vehicle II	3.36	5.04
14) Side assistant	Lower mid-range vehicle II	7.83	11.74
15) Distance sensor	Lower mid-range vehicle II	4.67	7.01
16) Near-distance radar	Lower mid-range vehicle II	3.67	5.54
17) Oxygen sensor	Off-road vehicle Large	8.76	13.08
	Off-road vehicle Large (Hybrid)	8.76	13.08
	Executive Car	6.44	9.63
	Lower mid-range vehicle	15.44	23.14
	Large-capacity limousine	5.93	8.88
	Minivan	10.16	15.21
	Off-road vehicle Medium	5.43	8.09
18) Servomotor gear	Small vehicle	6.83	10.21
	Very small vehicle	1.11	1.66
	Very small vehicle	1.04	1.55

* and derived from this also low other costs as described in the article.

Table S5. Ratio of revenues versus s cost of dismantling end of life vehicle components. Numbers in green indicate economic benefit, red no economic gain *Spain*.

components	car segment	ratio revenue/cost (Prices Oct. 2019)	ratio revenue/cost (50% higher scrap prices)
1) Heating blower	Off-road vehicle Large	0.56	0.83
	Large-capacity limousine	1.92	2.88
	Leisure activity vehicle	1.95	2.93
	Very small vehicle	0.51	0.76
	Minivan	0.72	1.08
	Lower mid-range vehicle II	1.27	1.91
2) Servomotor	Very small vehicle	0.56	0.84
	Small vehicle	0.41	0.62
	Minivan	0.13	0.20
	Lower mid-range vehicle	0.31	0.47
3) Starter	Large-capacity limousine	0.60	0.90
	Leisure activity vehicle	0.91	1.37
	Very small vehicle	1.01	1.51
	Minivan	1.02	1.53
	Lower mid-range vehicle	0.89	1.34
4) Fan motor	Mini vehicle	0.92	1.38
	Minivan	0.84	1.25
5) Generators	Large-capacity limousine	1.18	1.77
	Leisure activity vehicle	1.60	2.40
	Very small vehicle	1.24	1.87
	Minivan	1.61	2.41
	Lower mid-range vehicle	1.70	2.56
6) Wiper Motor	Off-road vehicle Great	0.59	0.88
	Large-capacity limousine	0.56	0.84
	Small vehicle	0.38	0.56
	Minivan	0.45	0.68
7) Engine control & Transmission control	Large-capacity limousine	0.79	1.19
	Very small vehicle	0.41	0.62
	Small vehicle	0.51	0.77
	Minivan	1.52	2.29
	Lower mid-range vehicle	1.02	1.52
	Lower mid-range vehicle II	3.49	5.24
	Off-road vehicle Large	1.88	2.83

	<i>Off-road vehicle Medium</i>	1.51	2.27
	<i>Very small vehicle</i>	0.75	1.12
8) Drive control	<i>Off-road vehicle Great</i>	1.30	1.95
	<i>Large-capacity limousine</i>	0.49	0.74
	<i>Very small vehicle</i>	0.83	1.24
	<i>Small vehicle</i>	0.58	0.87
	<i>Minivan</i>	1.00	1.50
	<i>Lower mid-range vehicle II</i>	0.75	1.13
9) Infotainment	<i>Off-road vehicle Large</i>	1.57	2.35
	<i>Lower mid-range vehicle</i>	0.72	1.08
10) Chassis control	<i>Off-road vehicle Large</i>	0.15	0.23
	<i>Large-capacity limousine</i>	1.52	2.28
11) CD charger	<i>Off-road vehicle Large</i>	0.30	0.45
TV tuner	<i>Off-road vehicle Large</i>	0.42	0.62
Radio control	<i>Off-road vehicle Large</i>	0.20	0.30
12) Inverter	<i>Off-road vehicle Large</i>	2.46	3.69
13) Start/Stop motor	<i>Lower mid-range vehicle</i>	1.10	1.65
	<i>Lower mid-range vehicle II</i>	2.22	3.33
14) Side assistant	<i>Lower mid-range vehicle II</i>	5.17	7.75
15) Distance sensor	<i>Lower mid-range vehicle II</i>	3.09	4.63
16) Near-distance radar	<i>Lower mid-range vehicle II</i>	2.44	3.66
17) Oxygen sensor	<i>Off-road vehicle Large</i>	5.80	8.67
	<i>Off-road vehicle Large (Hybrid)</i>	5.80	8.67
	<i>Executive Car</i>	4.25	6.37
	<i>Lower mid-range vehicle</i>	10.20	15.30
	<i>Large-capacity limousine</i>	3.92	5.87
	<i>Minivan</i>	6.71	10.06
	<i>Off-road vehicle Medium</i>	3.60	5.37
	<i>Small vehicle</i>	4.51	6.76
18) Servomotor gear	<i>Very small vehicle</i>	0.73	1.10
	<i>Very small vehicle</i>	0.68	1.02