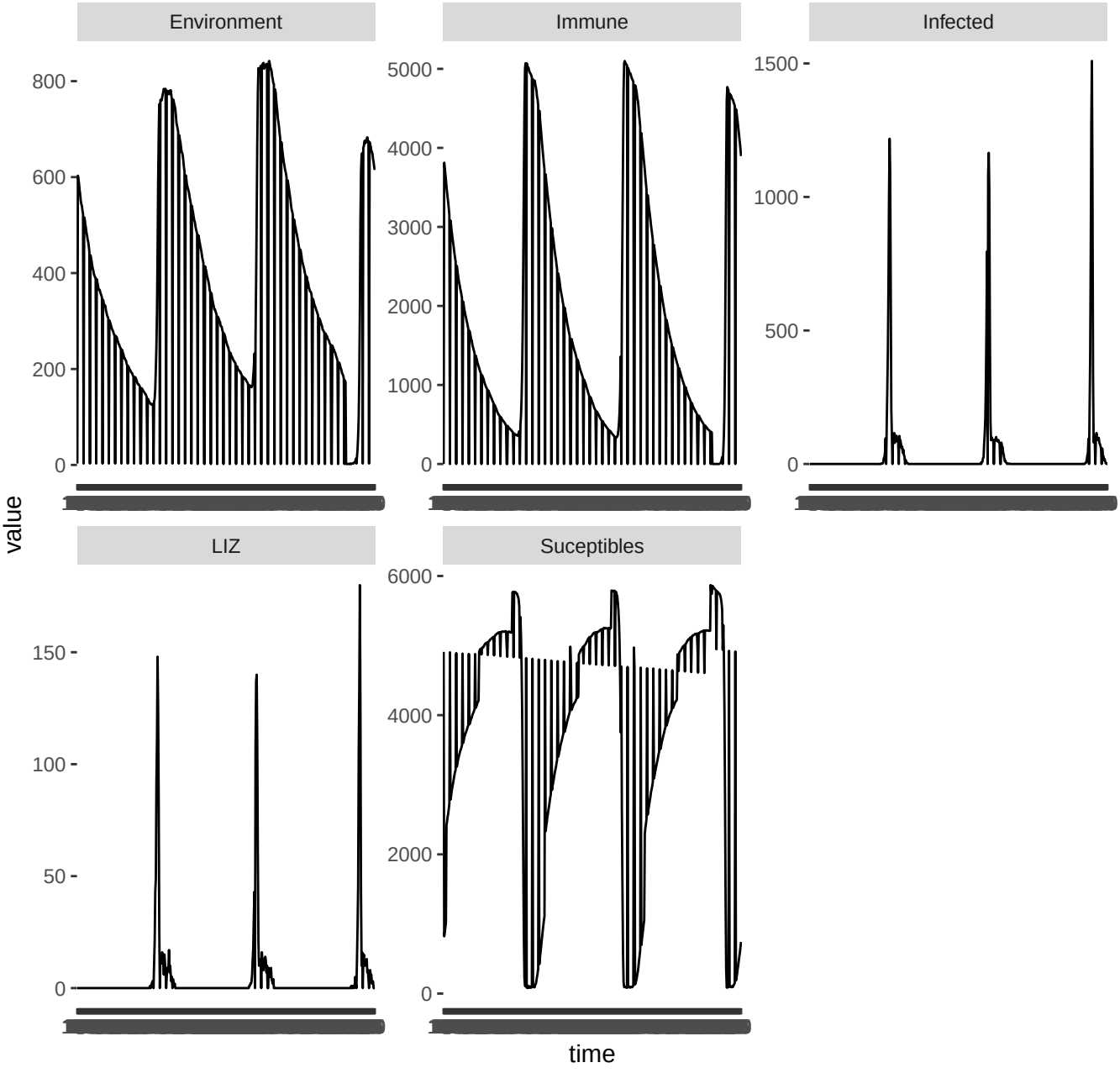
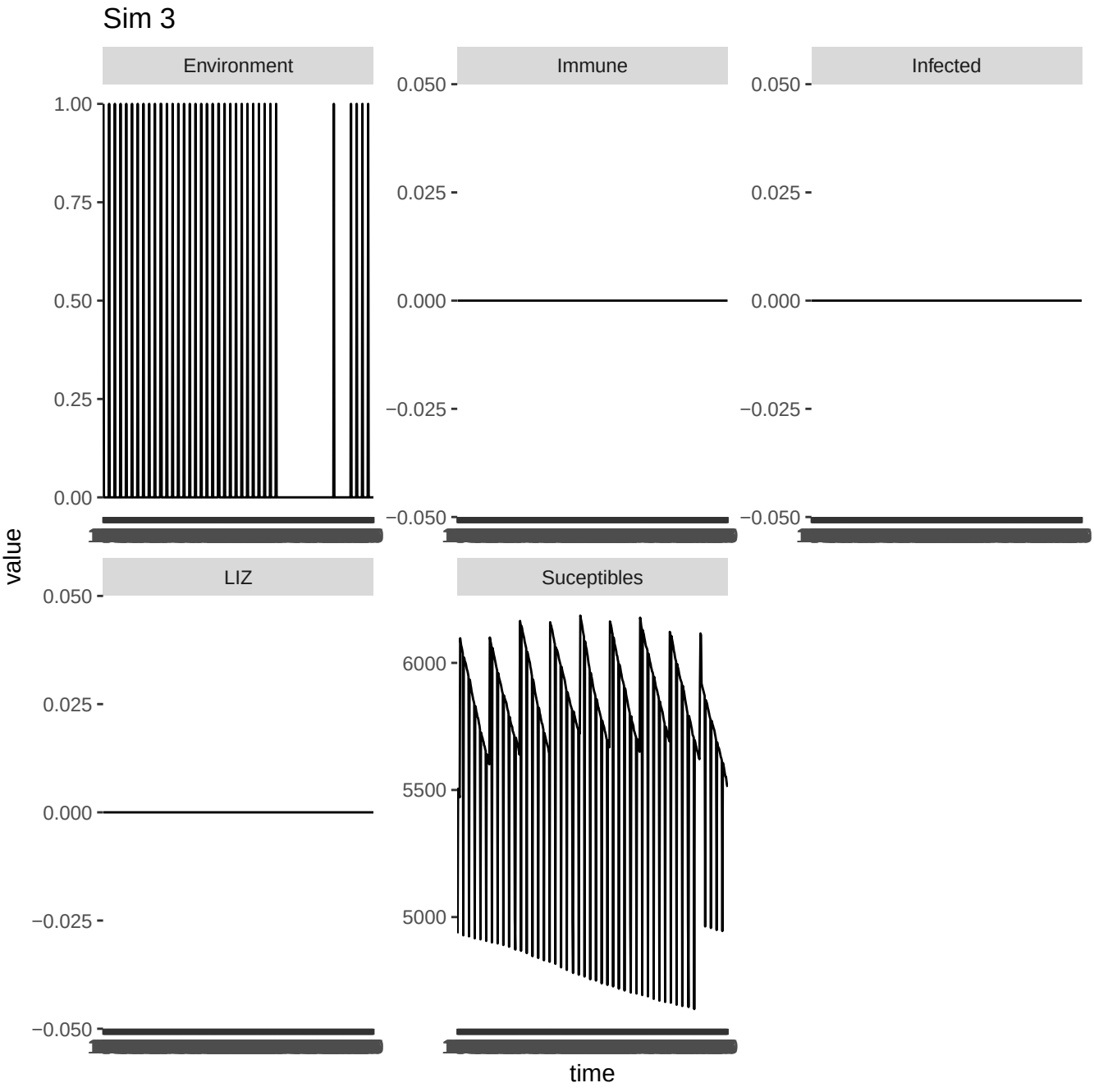
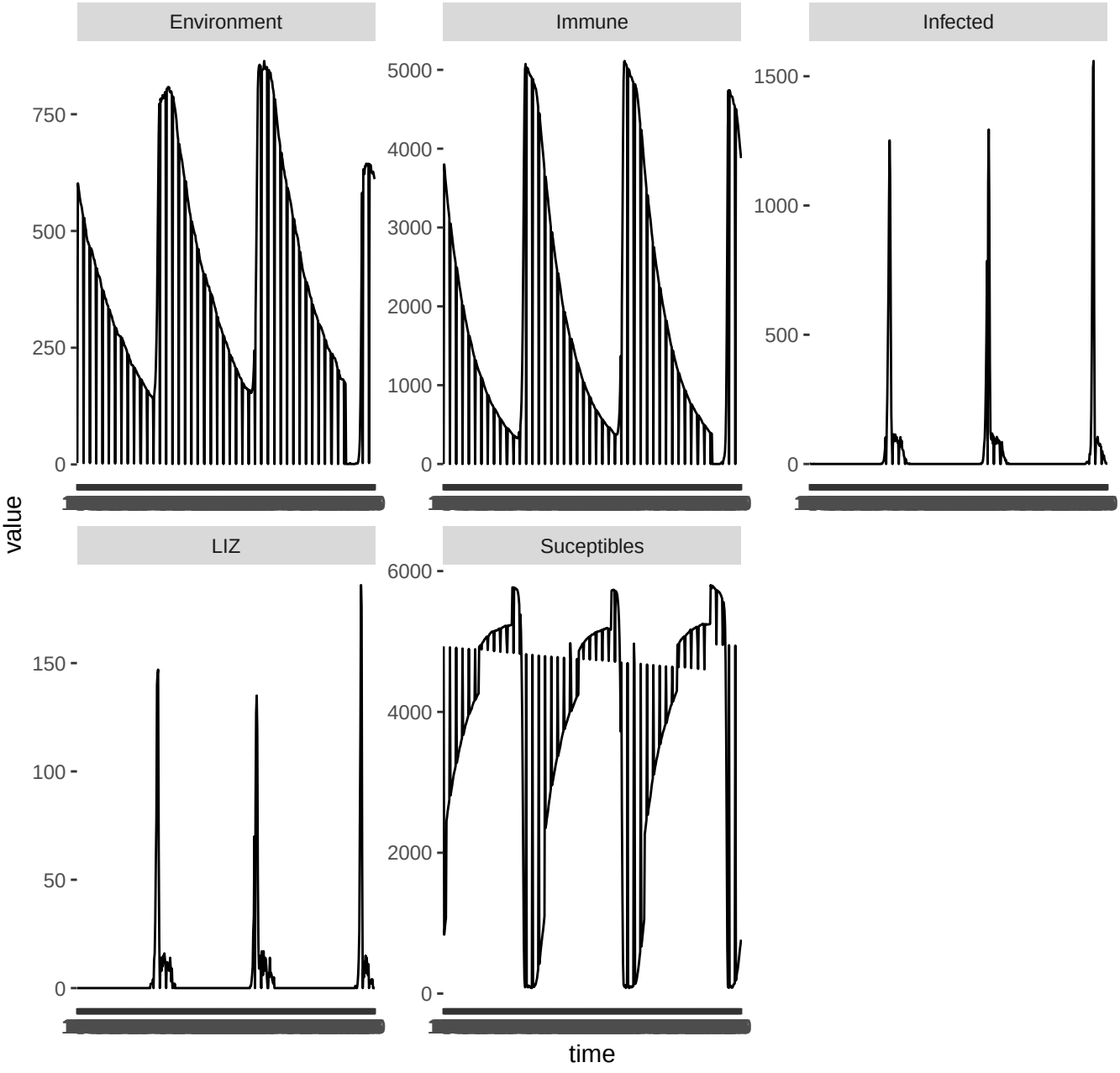
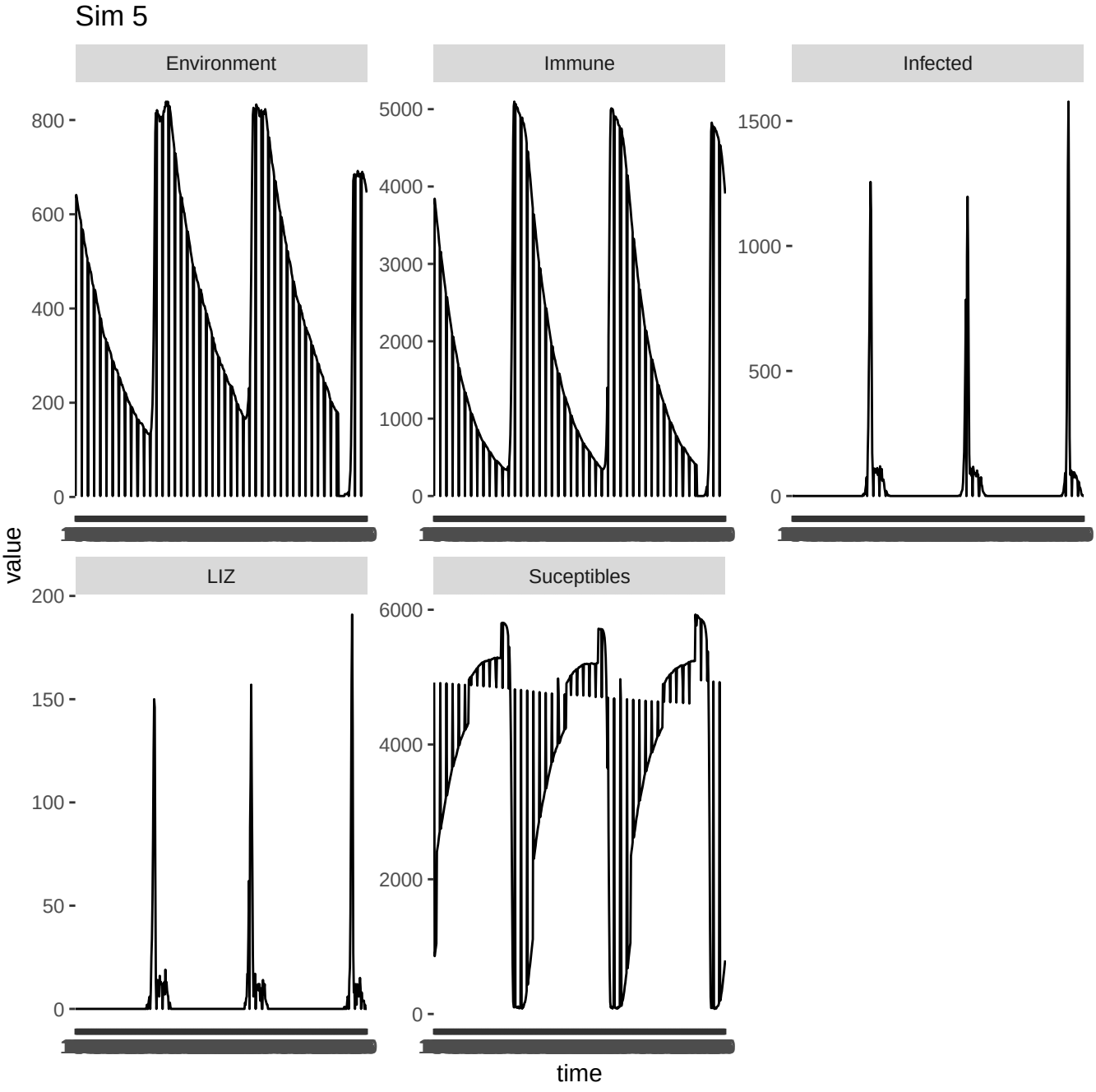
Sim 2

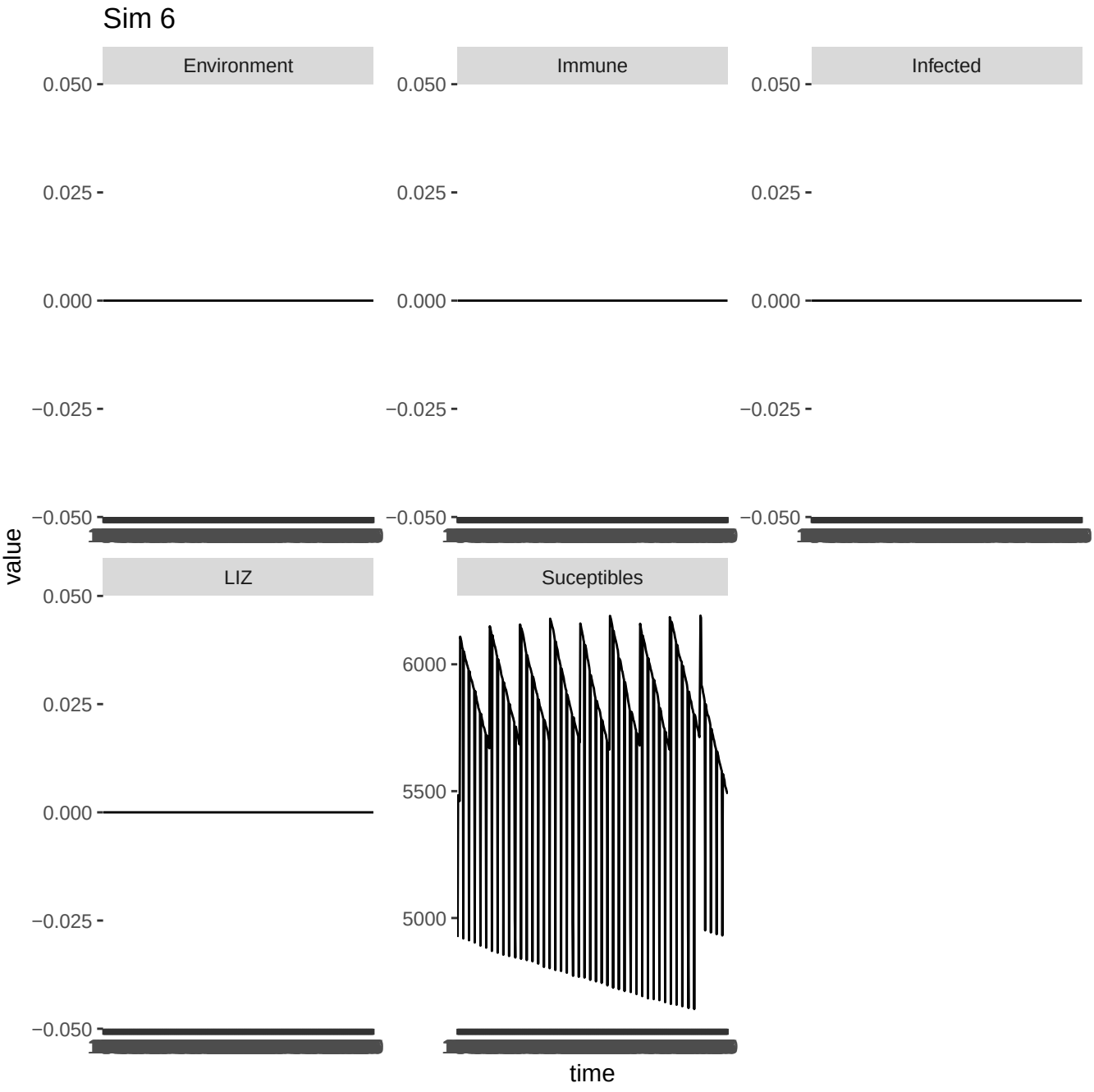

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

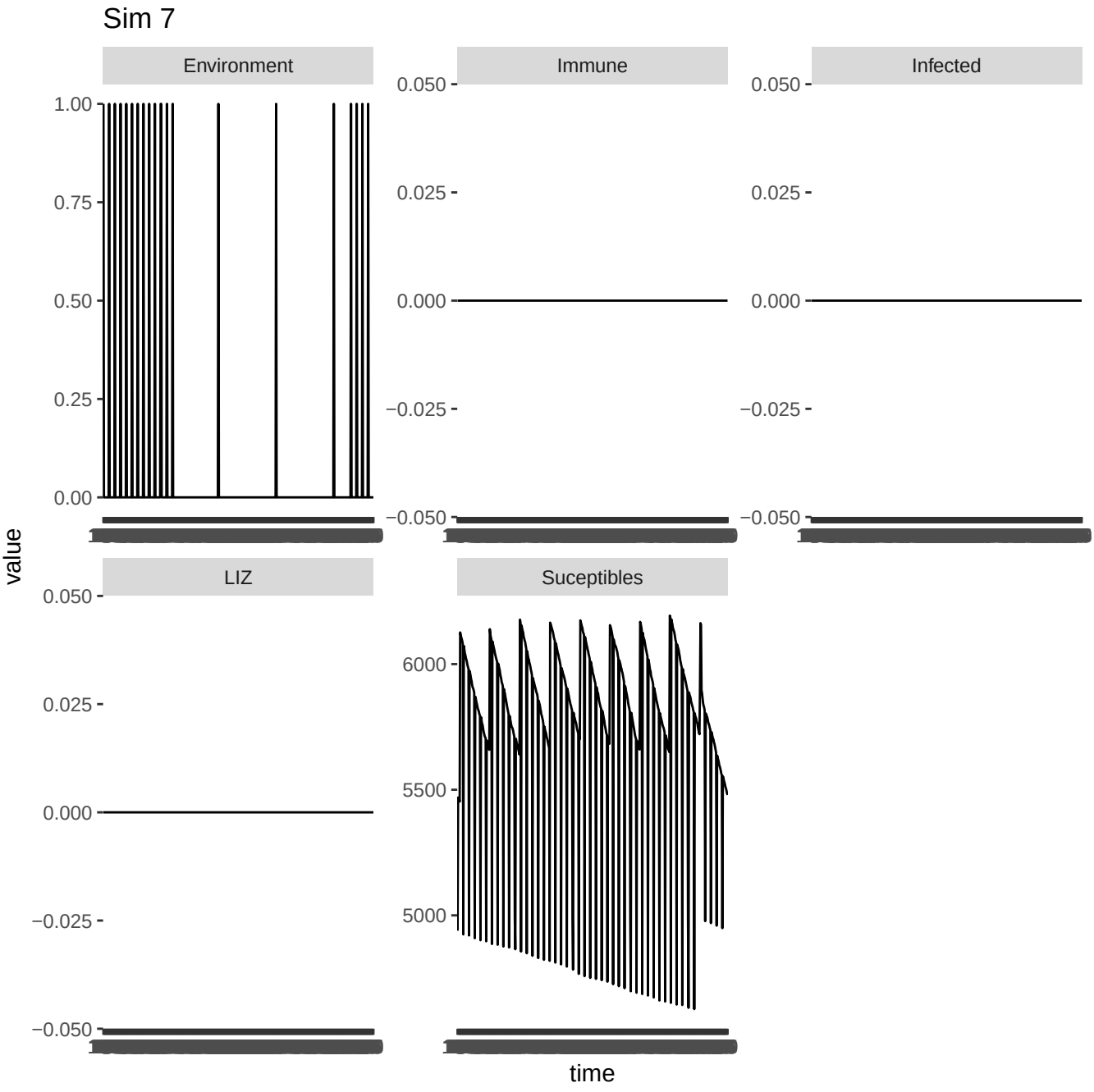

Sim 3
Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

Sim 4

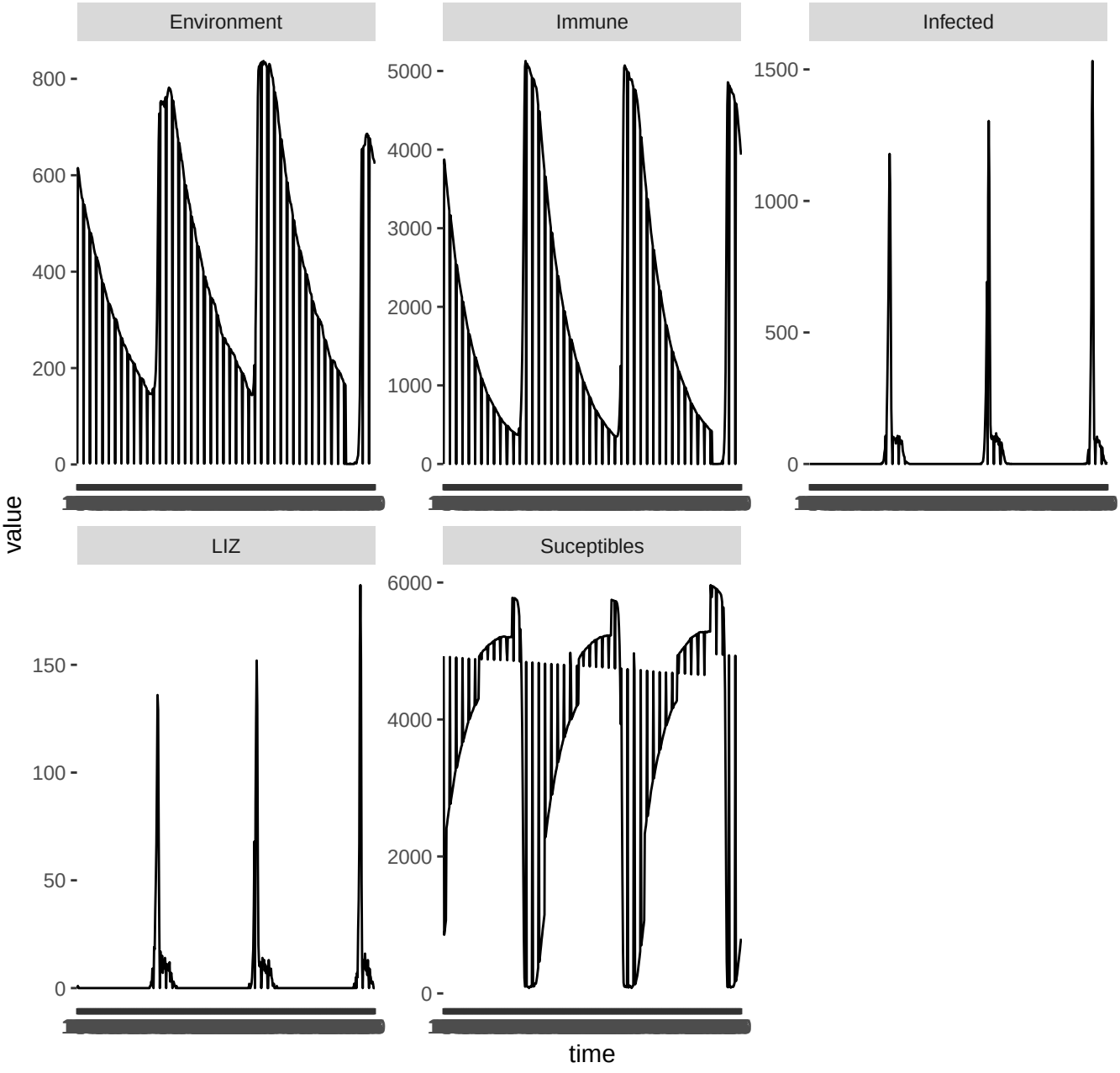

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
2000
3000
4000
5000
6000
1500
50
100
150


Sim 5
Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

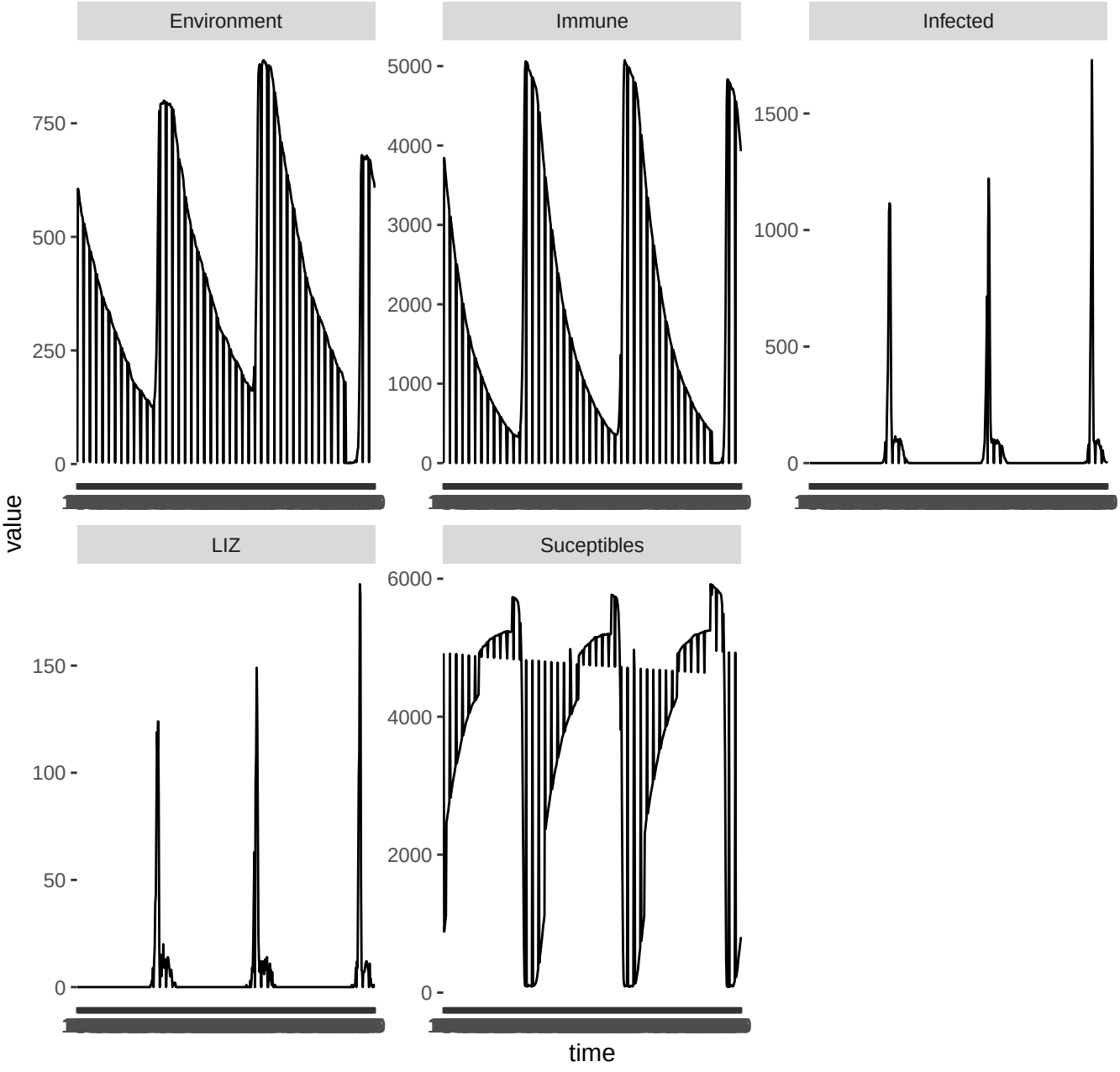

Sim 6
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time


Sim 7
Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

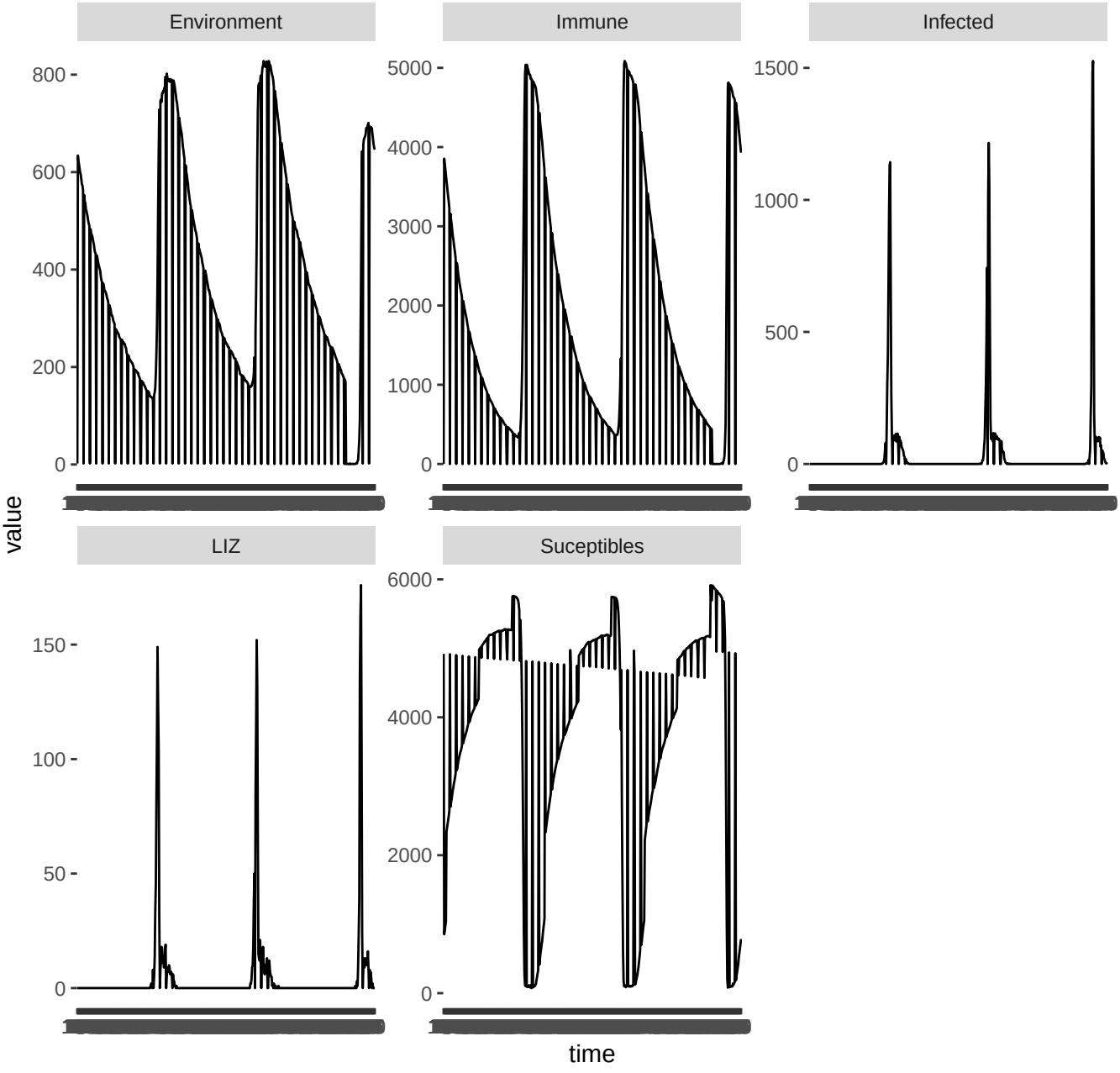
Sim 8


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

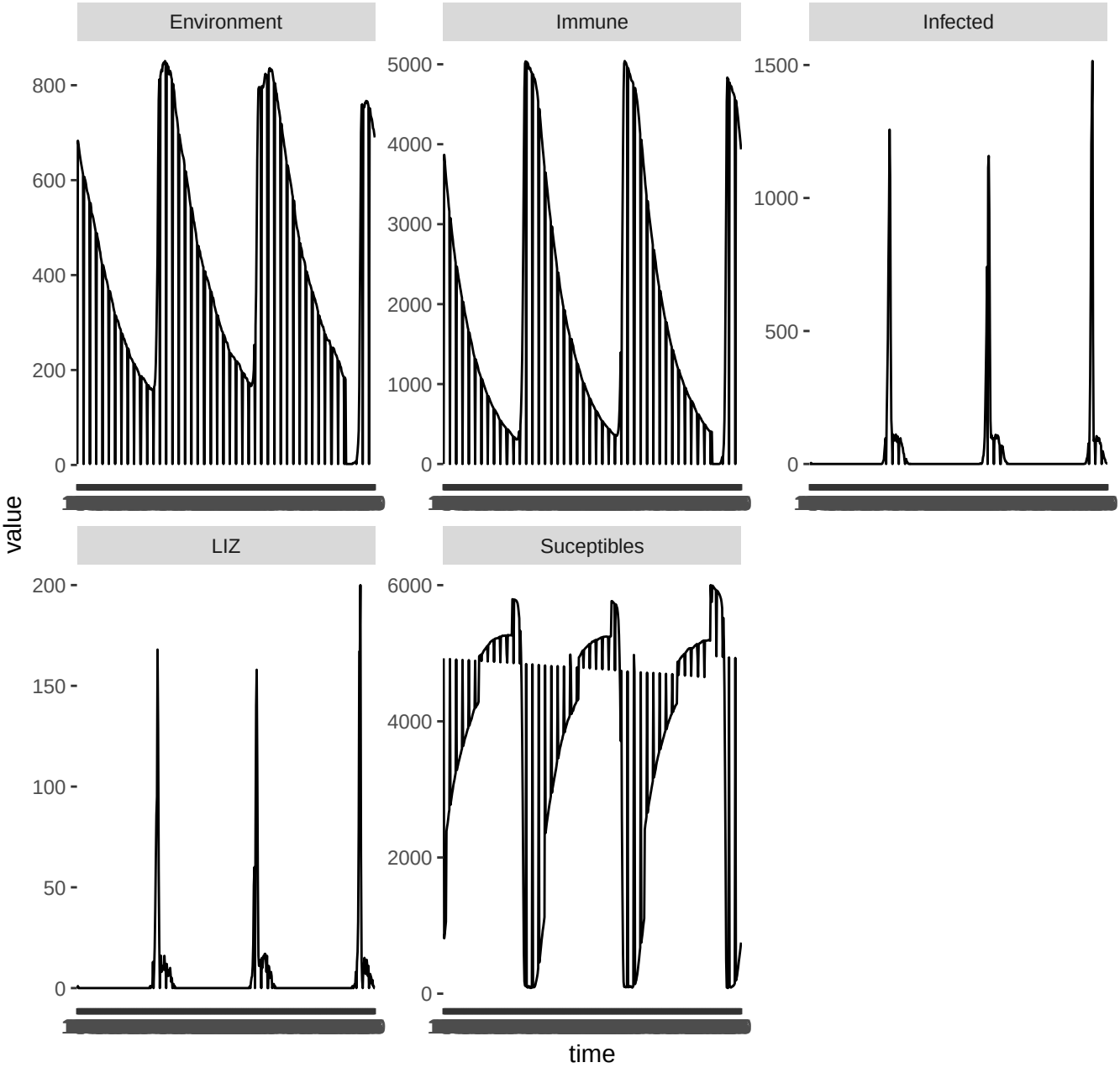
Sim 9


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150

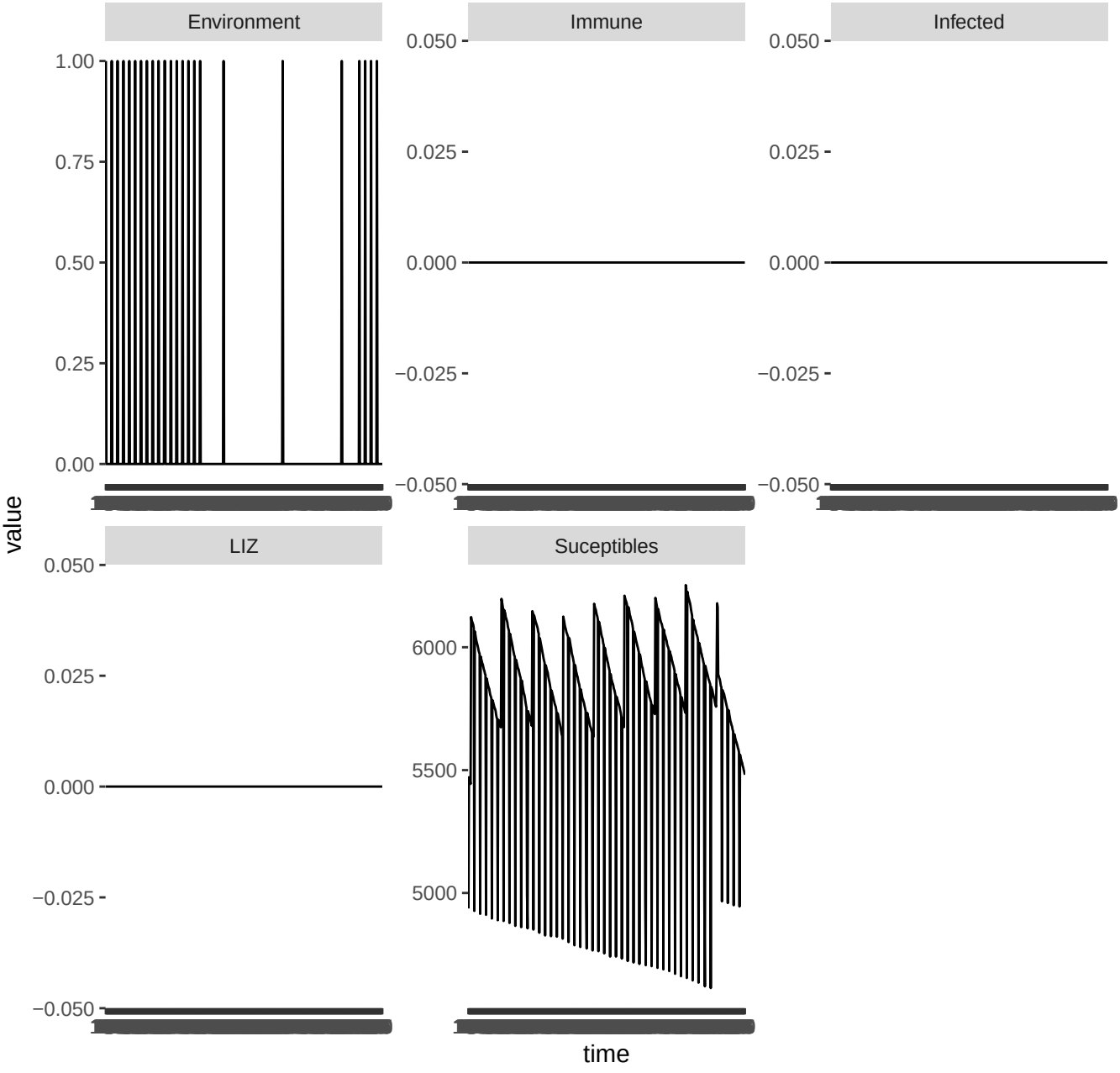
Sim 10


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

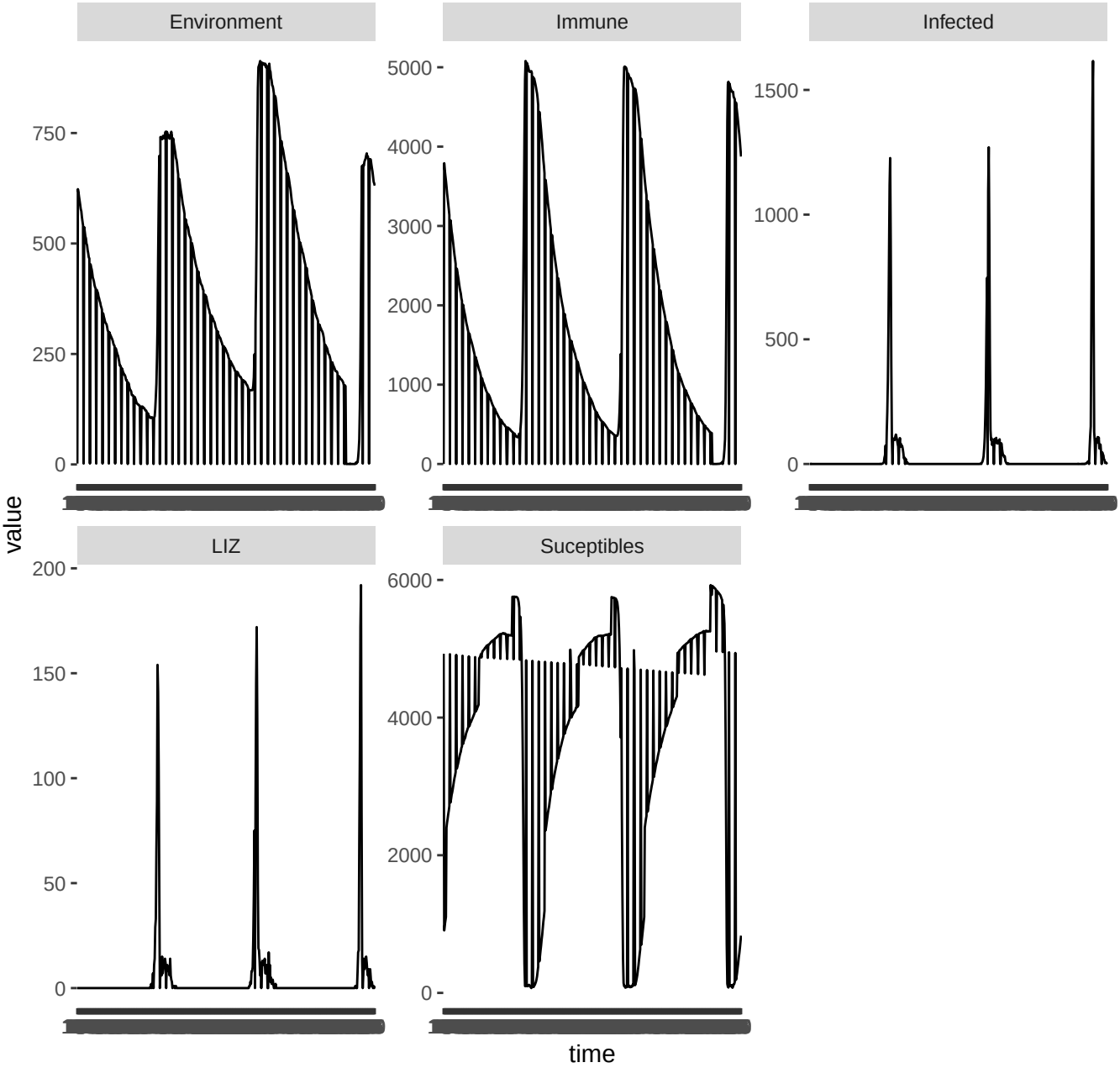
Sim 11


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

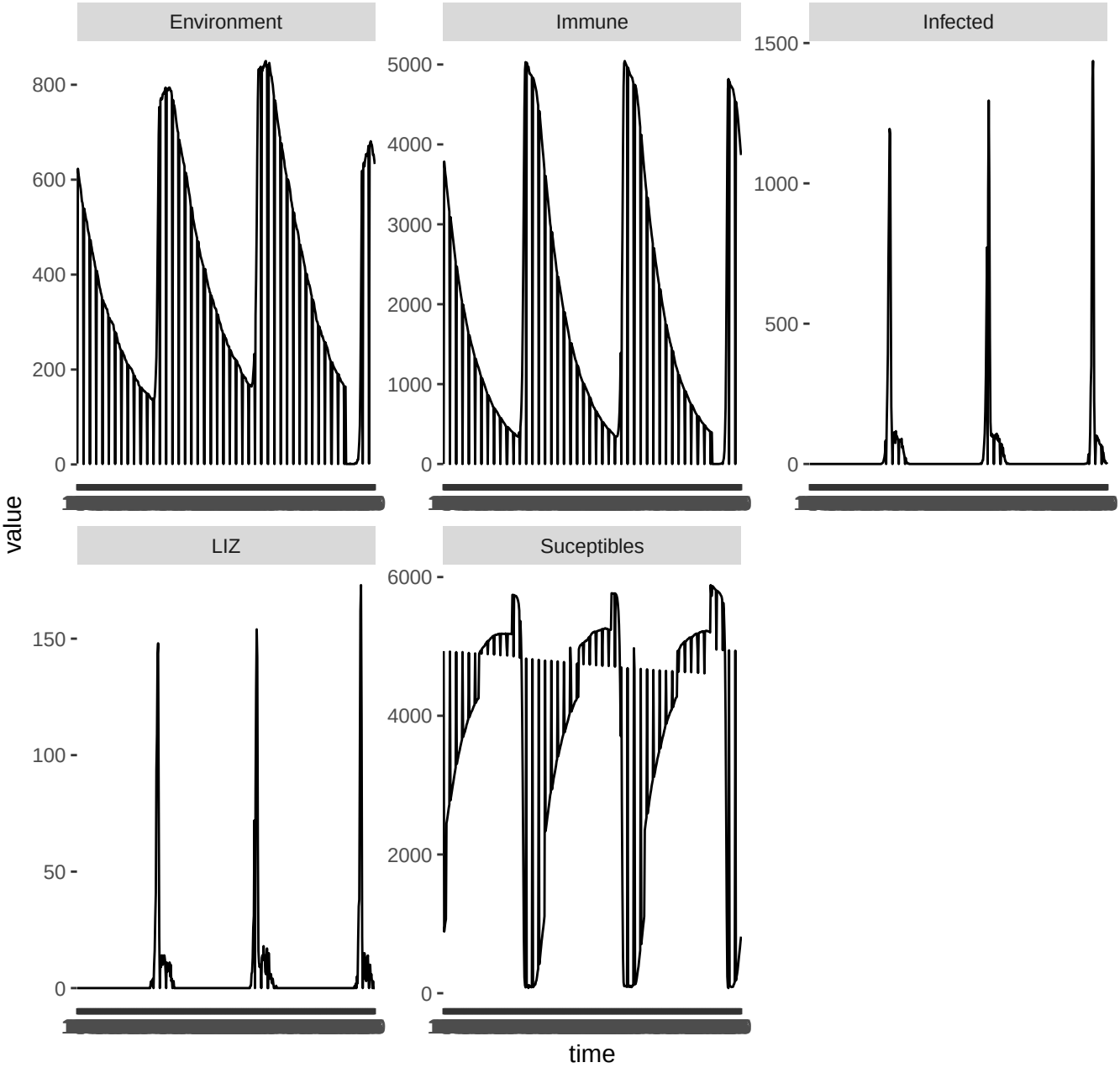
Sim 12

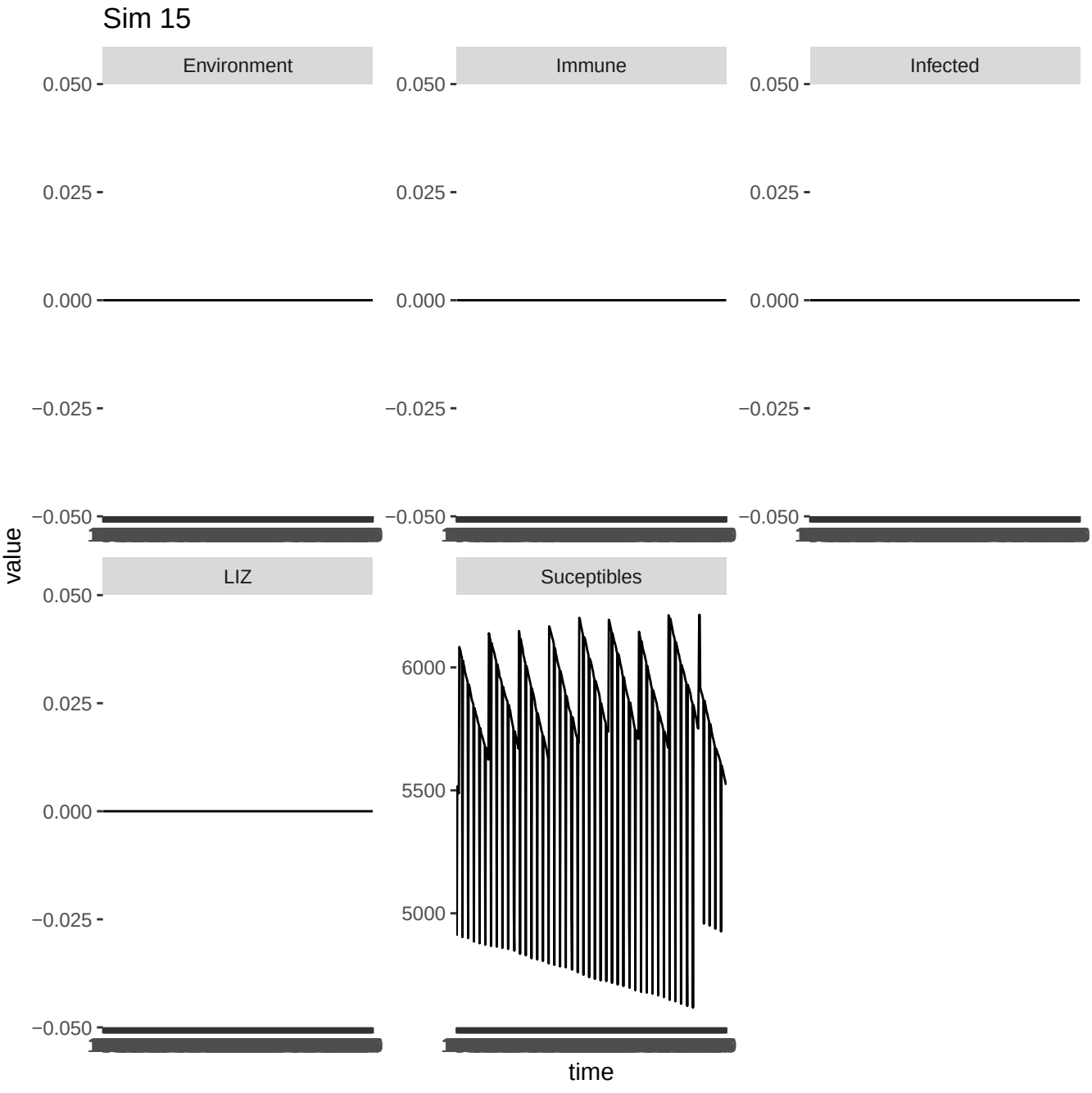

Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

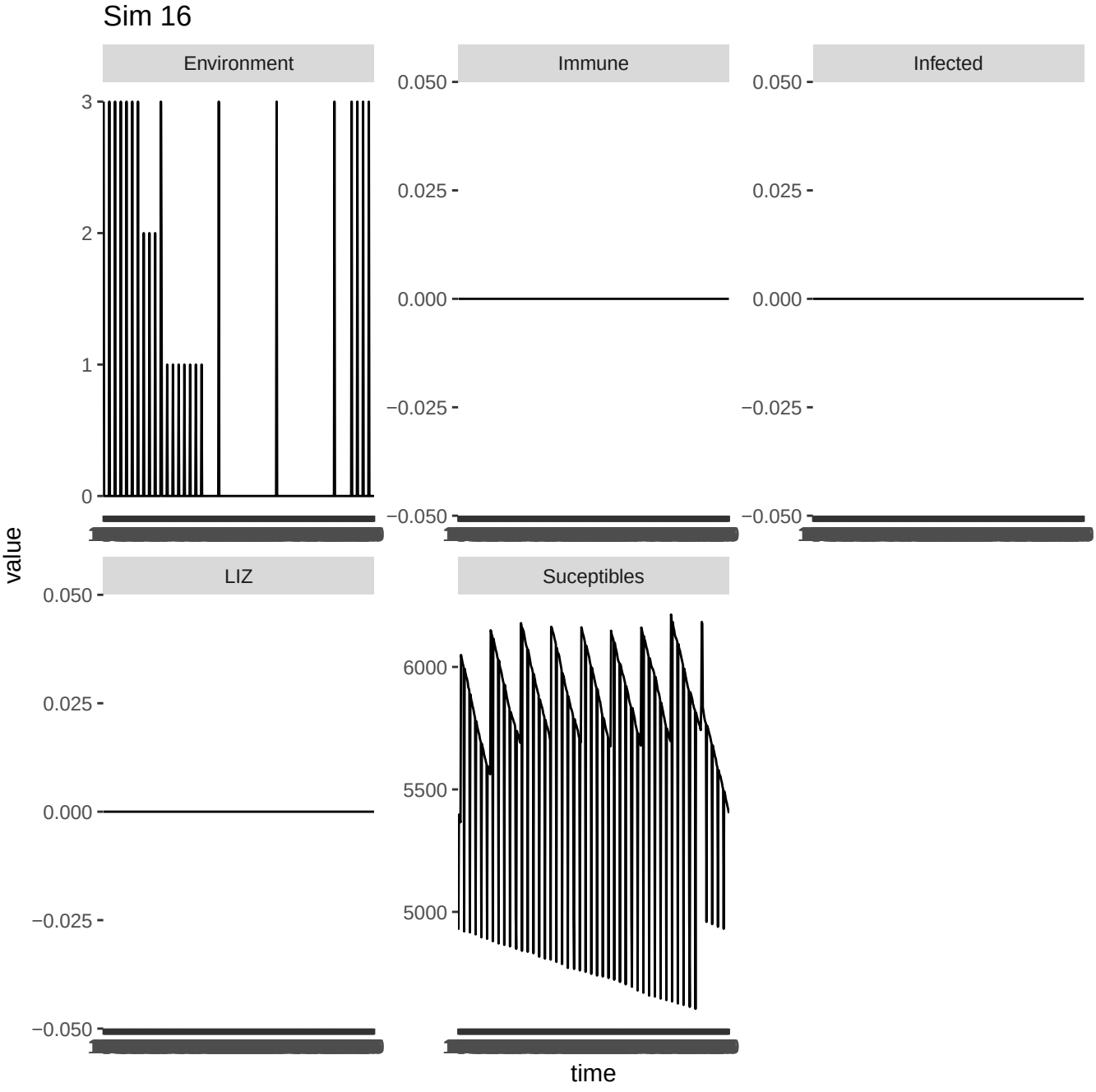
Sim 13


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150
200

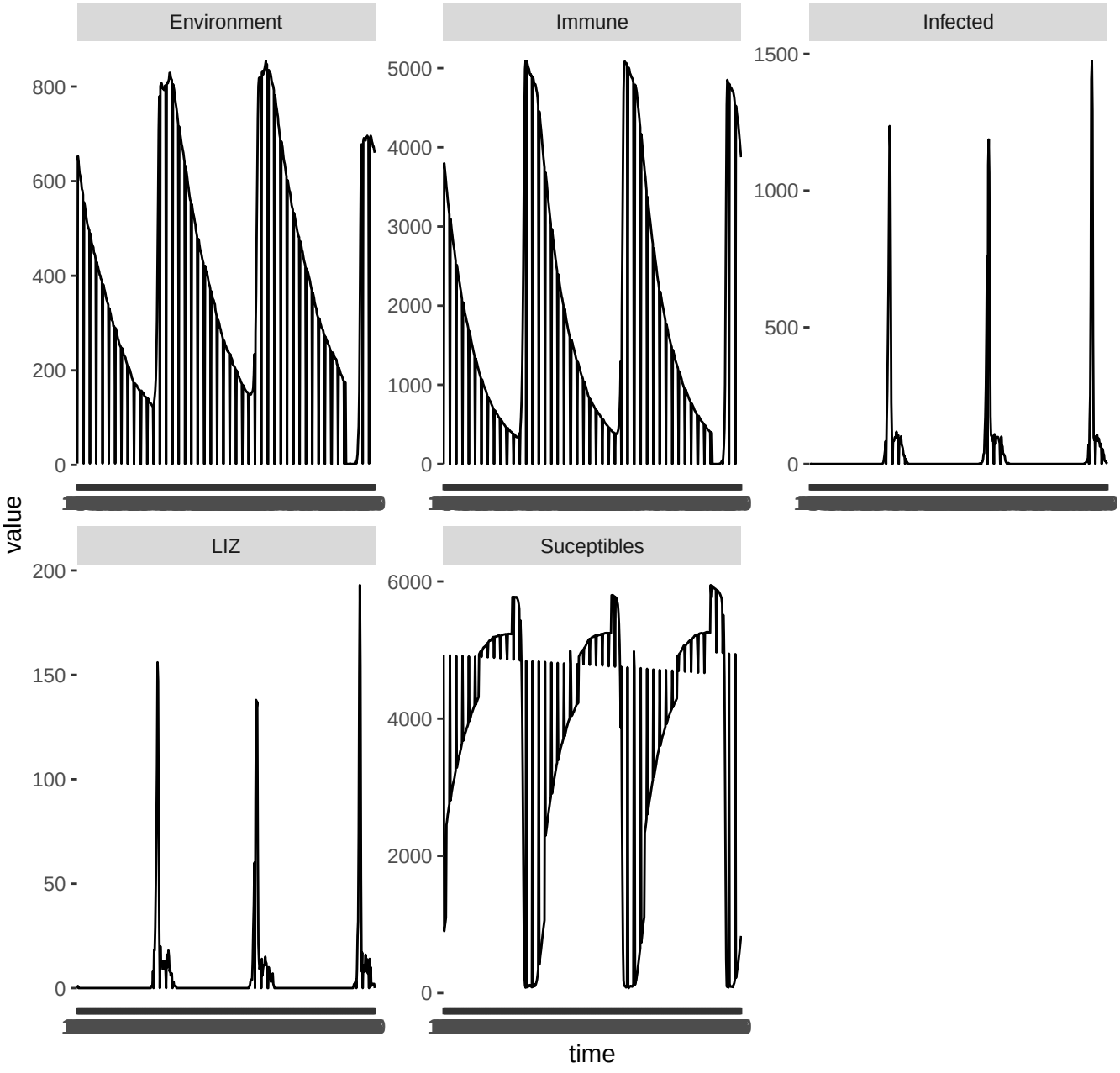
Sim 14

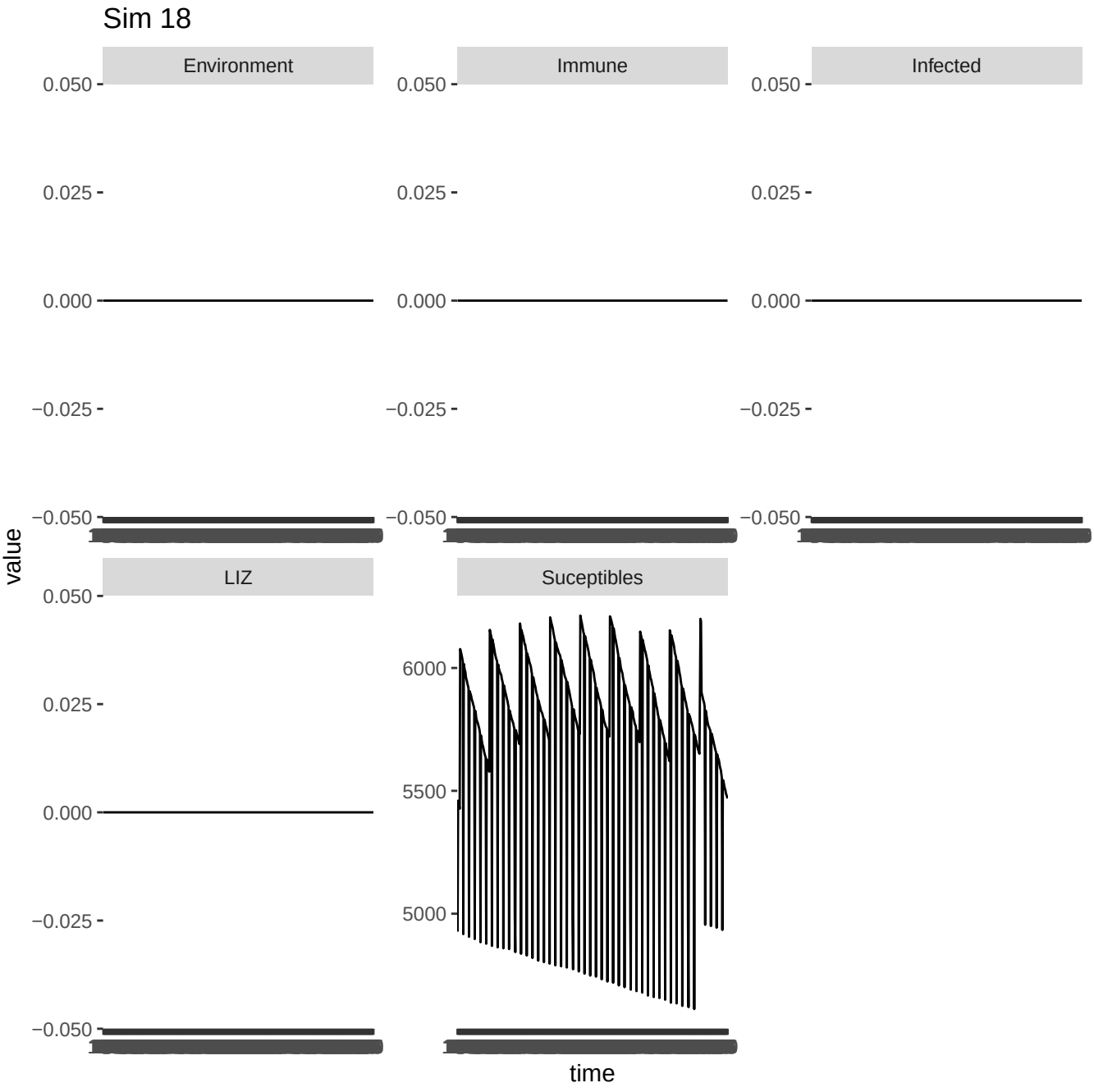

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000


Sim 15
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

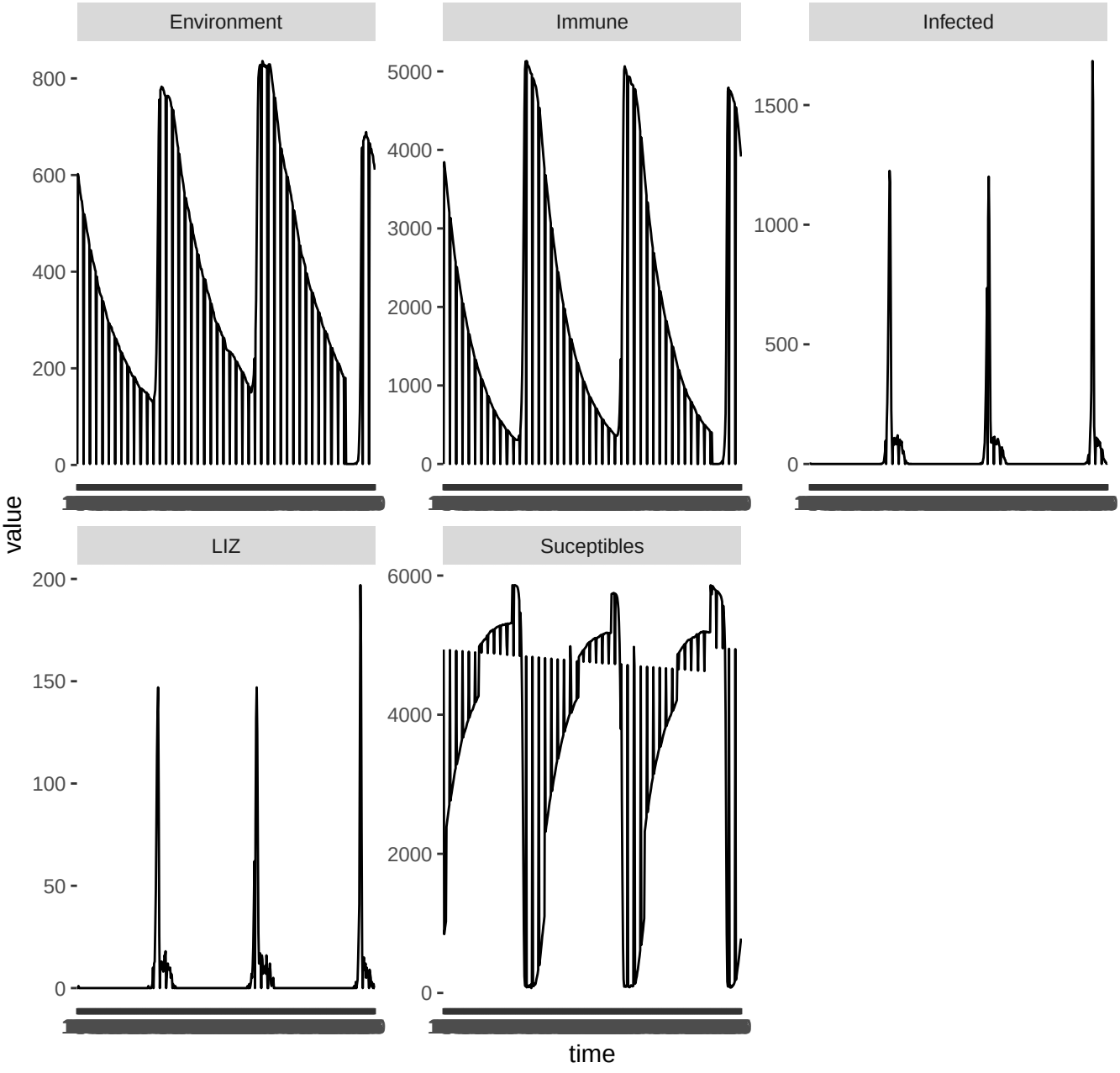

Sim 16
Environment
Immune
Infected
LIZ
Suceptibles
value
time
3
2
1
0
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

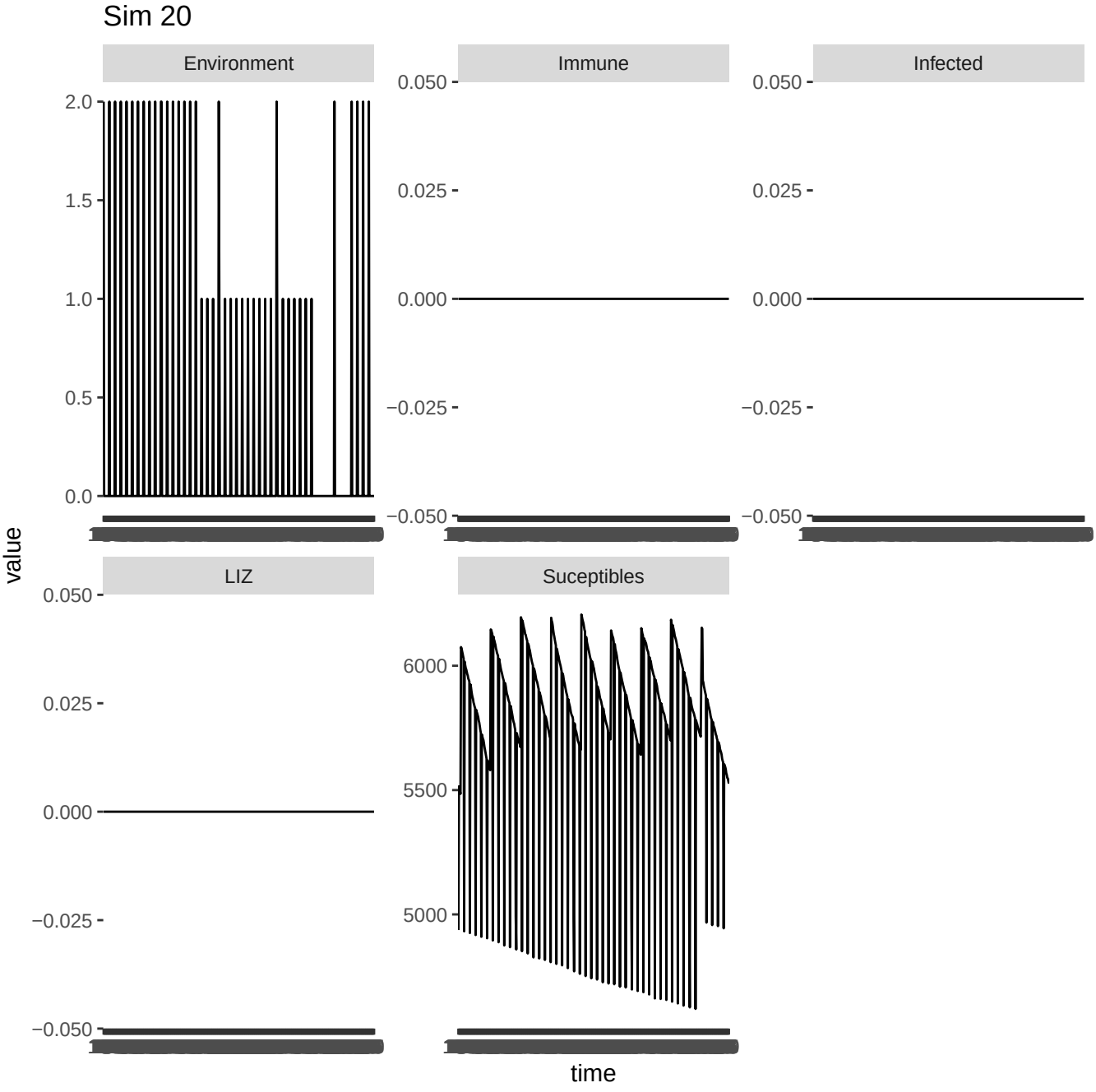
Sim 17


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

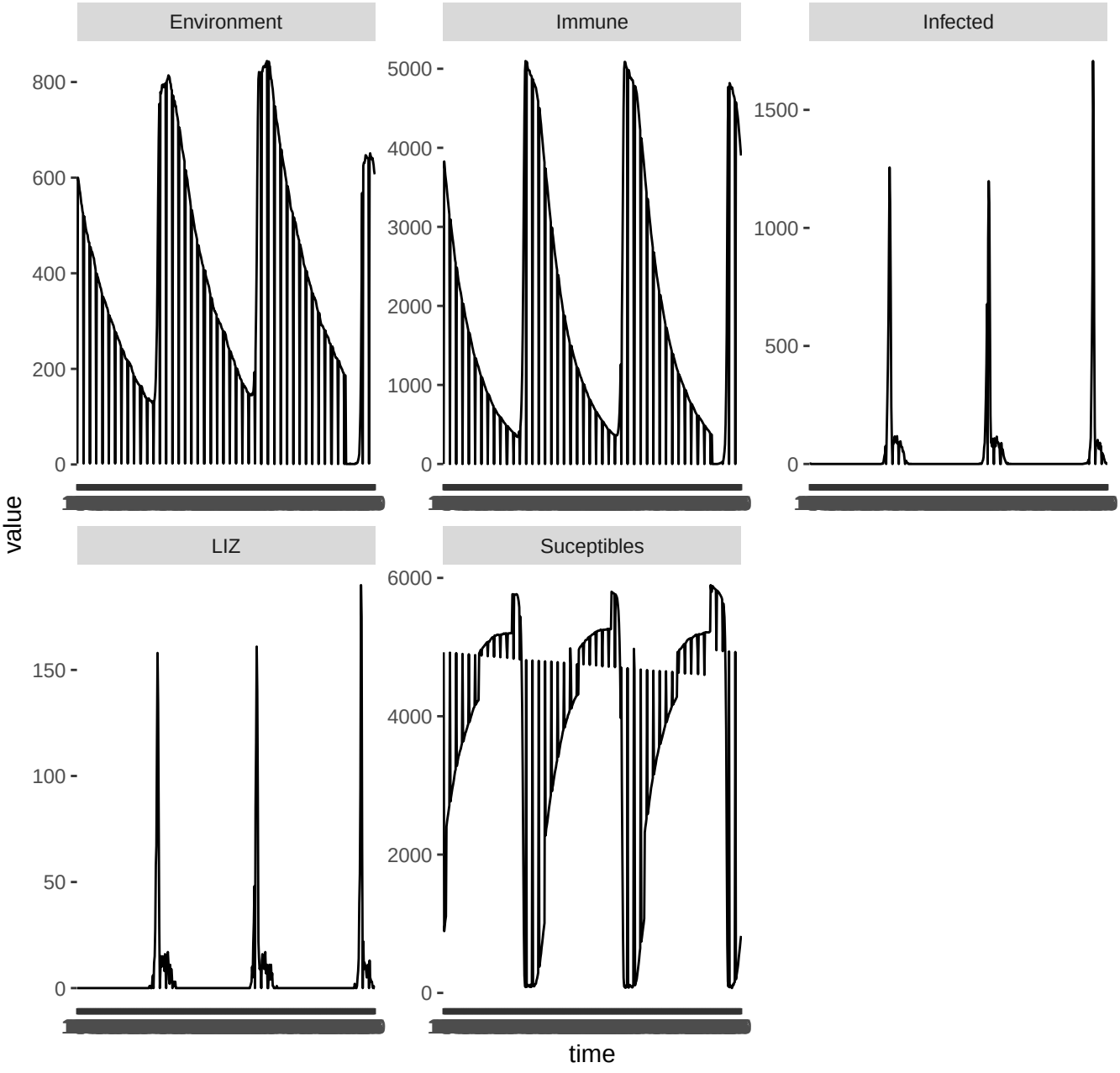

Sim 18
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

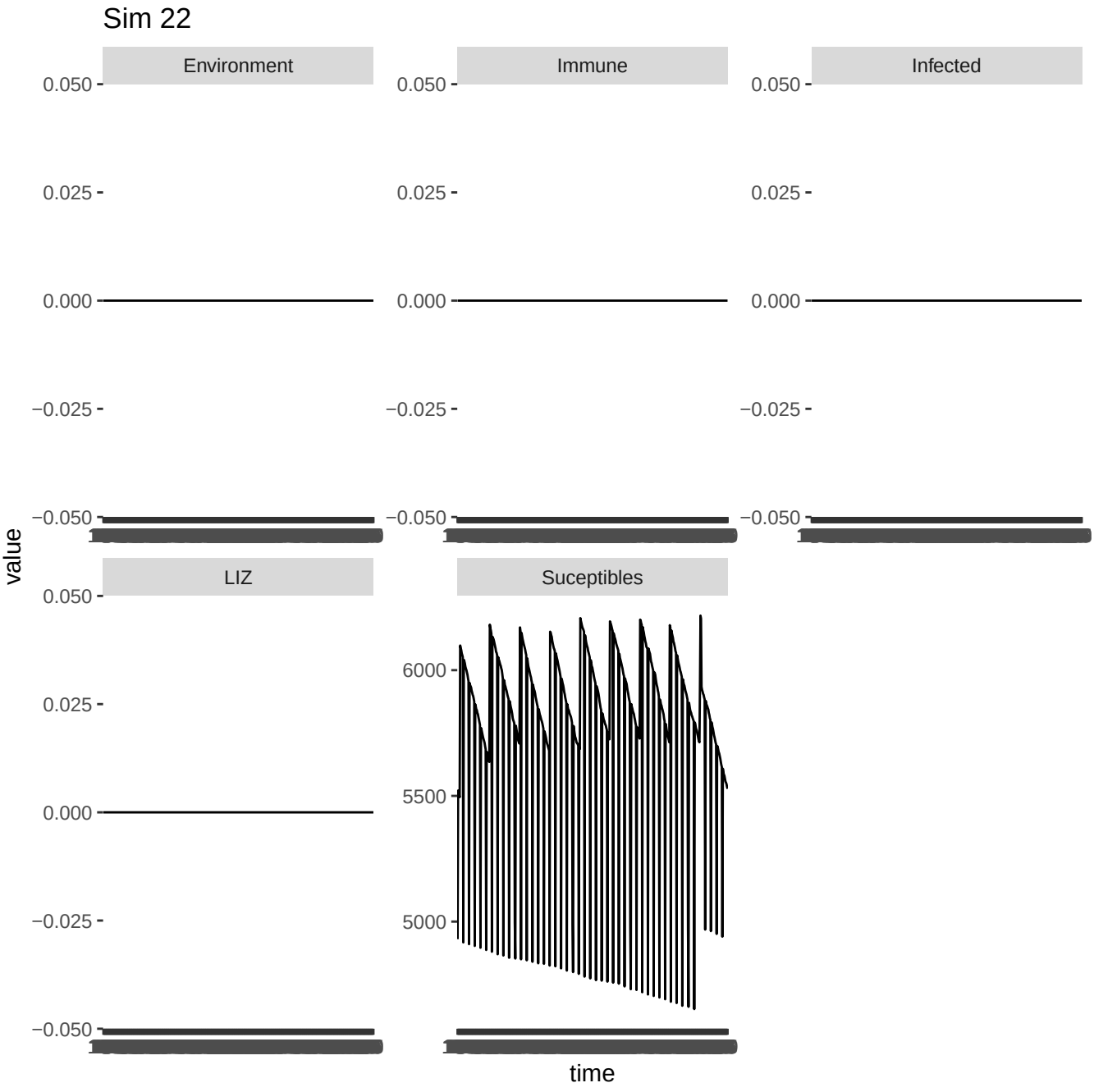
Sim 19

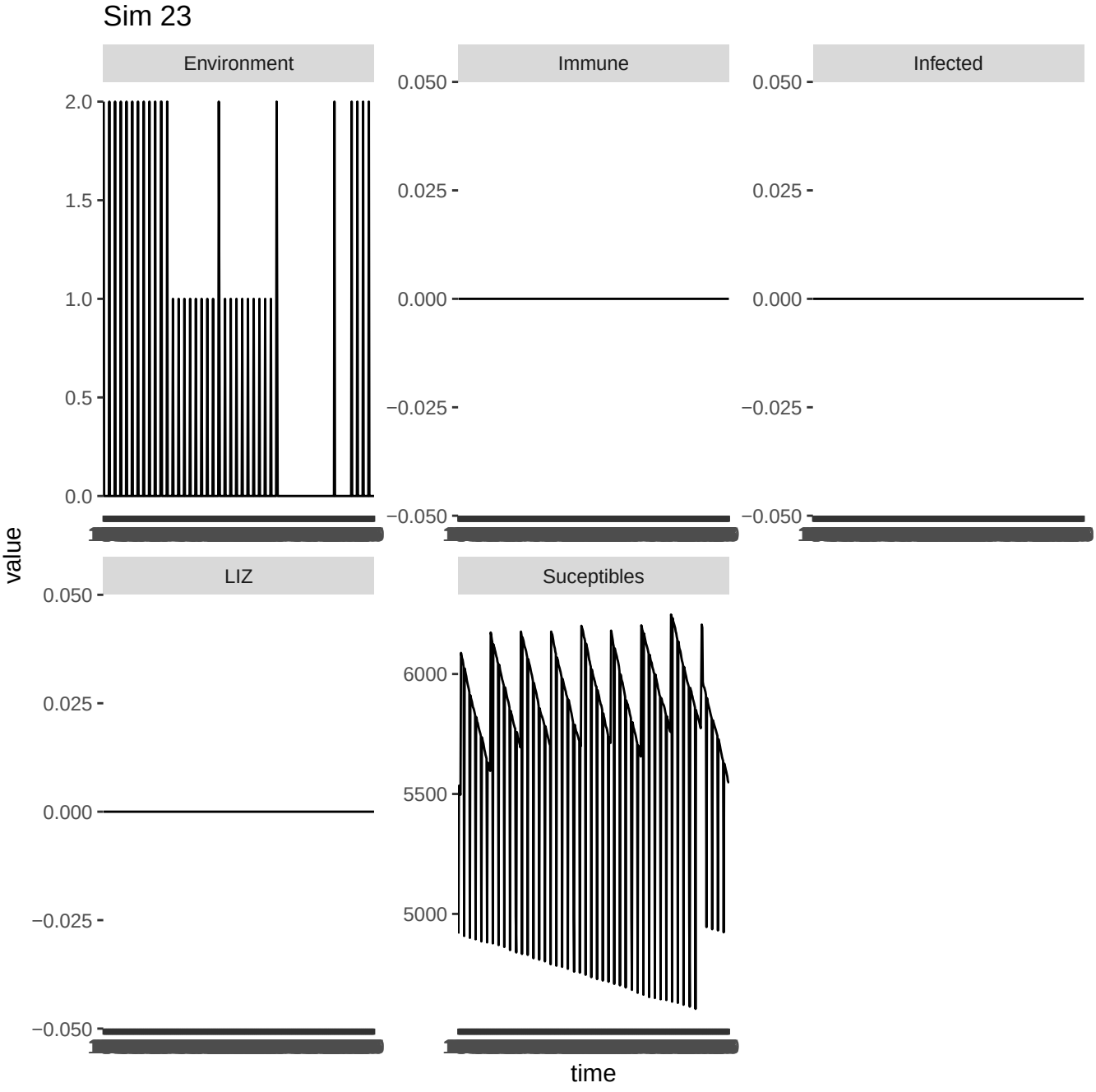

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

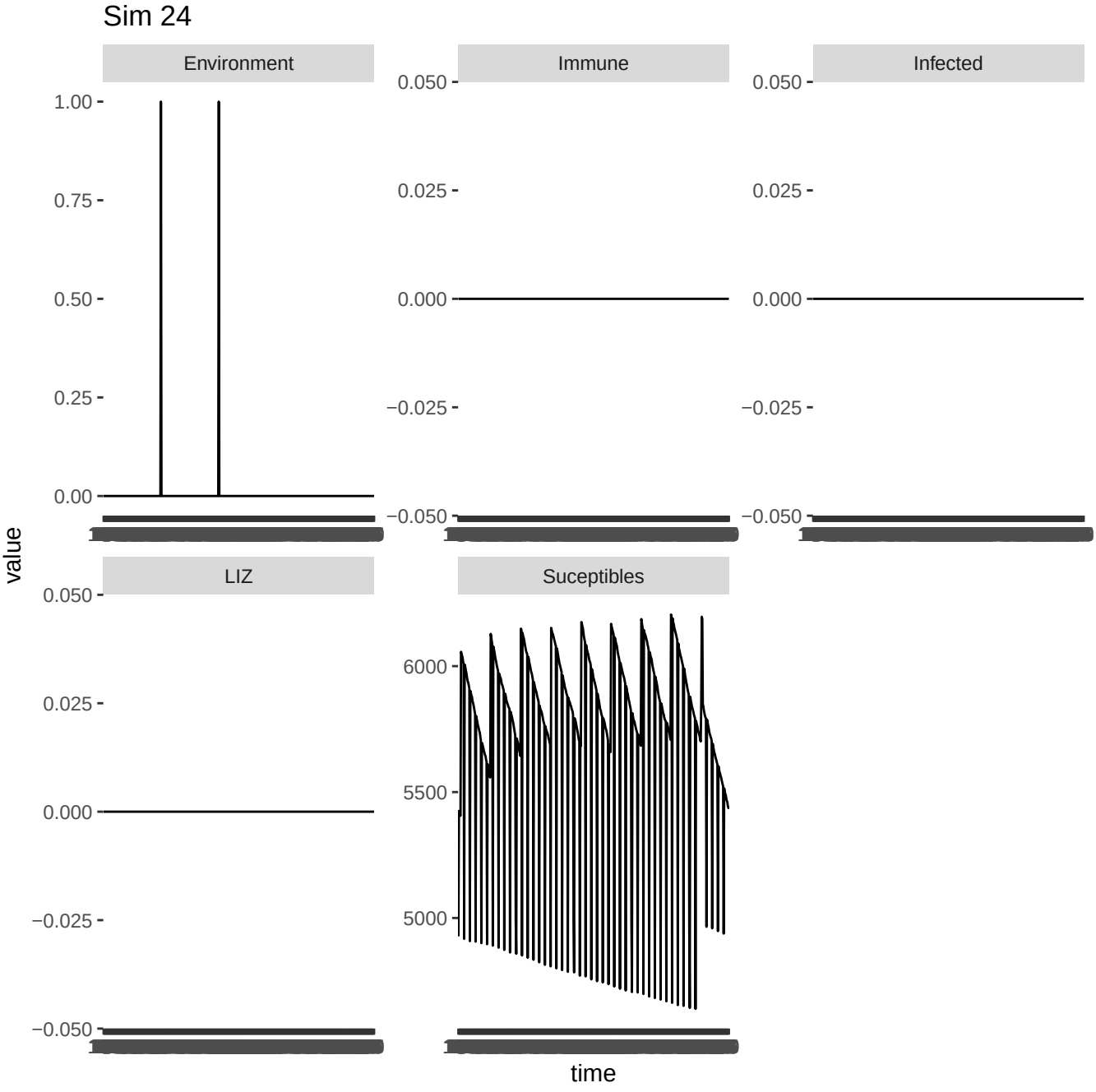

Sim 20
Environment
Immune
Infected
LIZ
Suceptibles
value
time
2.0
1.5
1.0
0.5
0.0
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

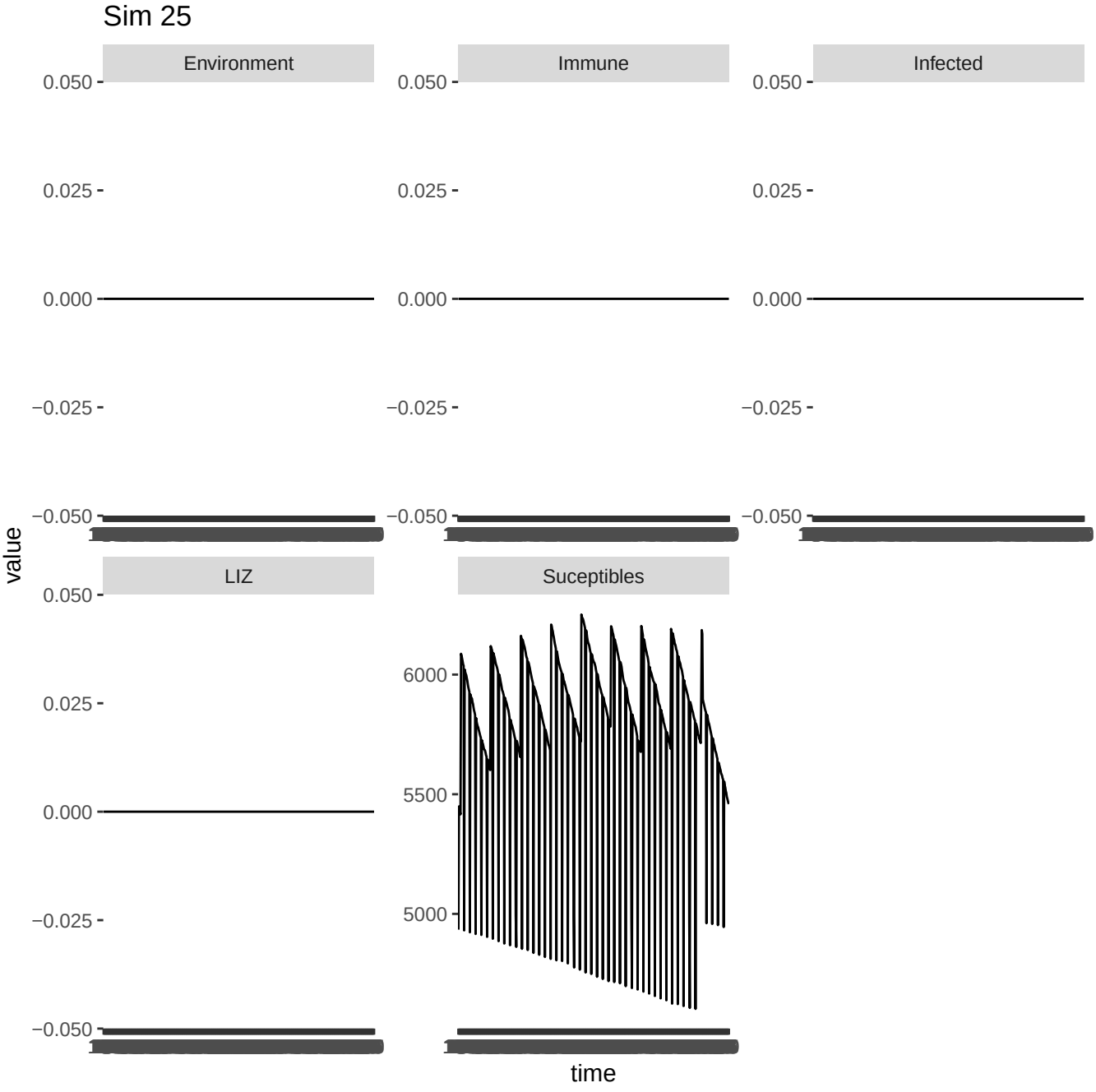
Sim 21


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

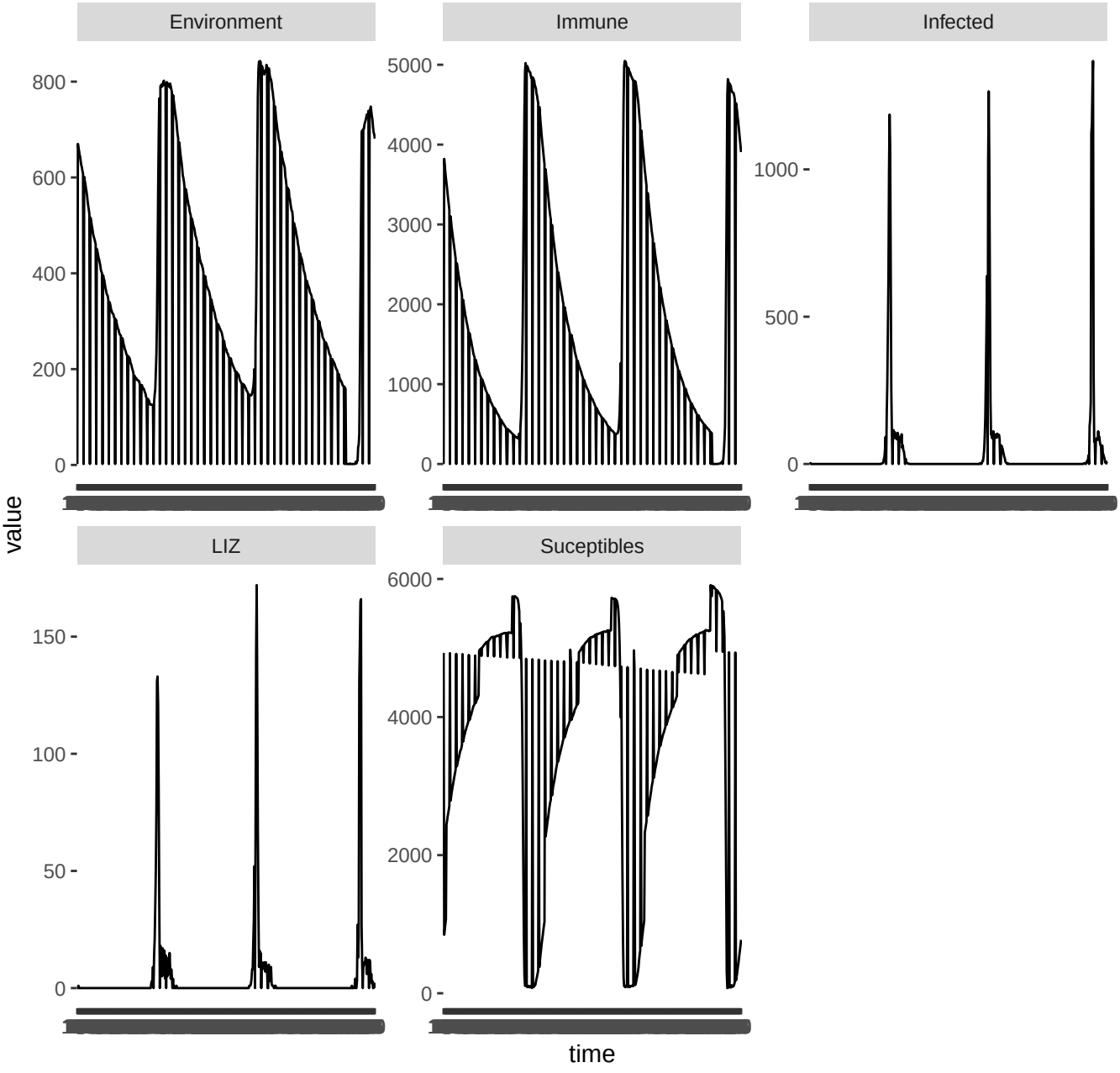

Sim 22
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

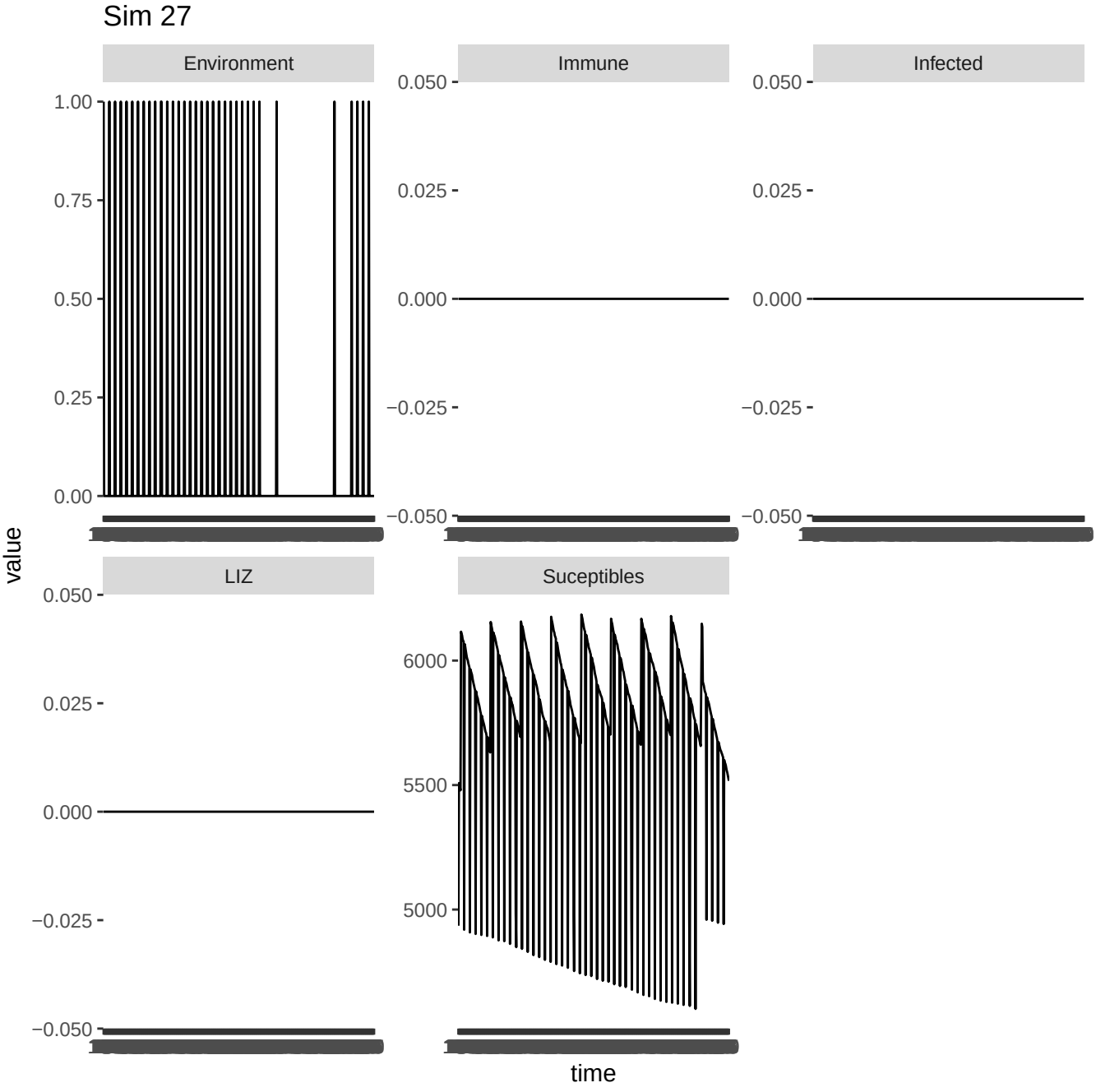

Sim 23
Environment
Immune
Infected
LIZ
Suceptibles
value
time
2.0
1.5
1.0
0.5
0.0
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000


Sim 24
Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

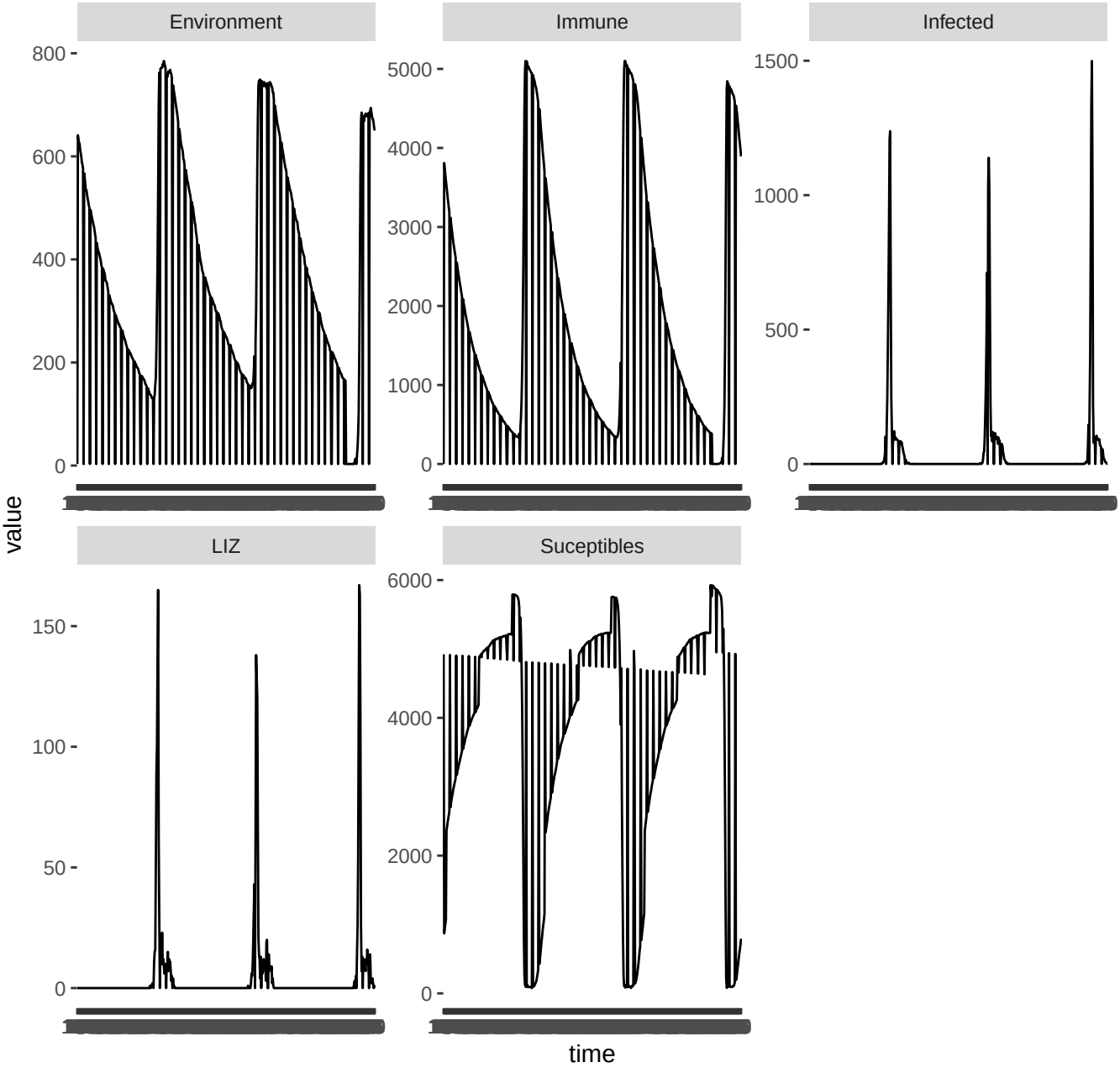

Sim 25
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

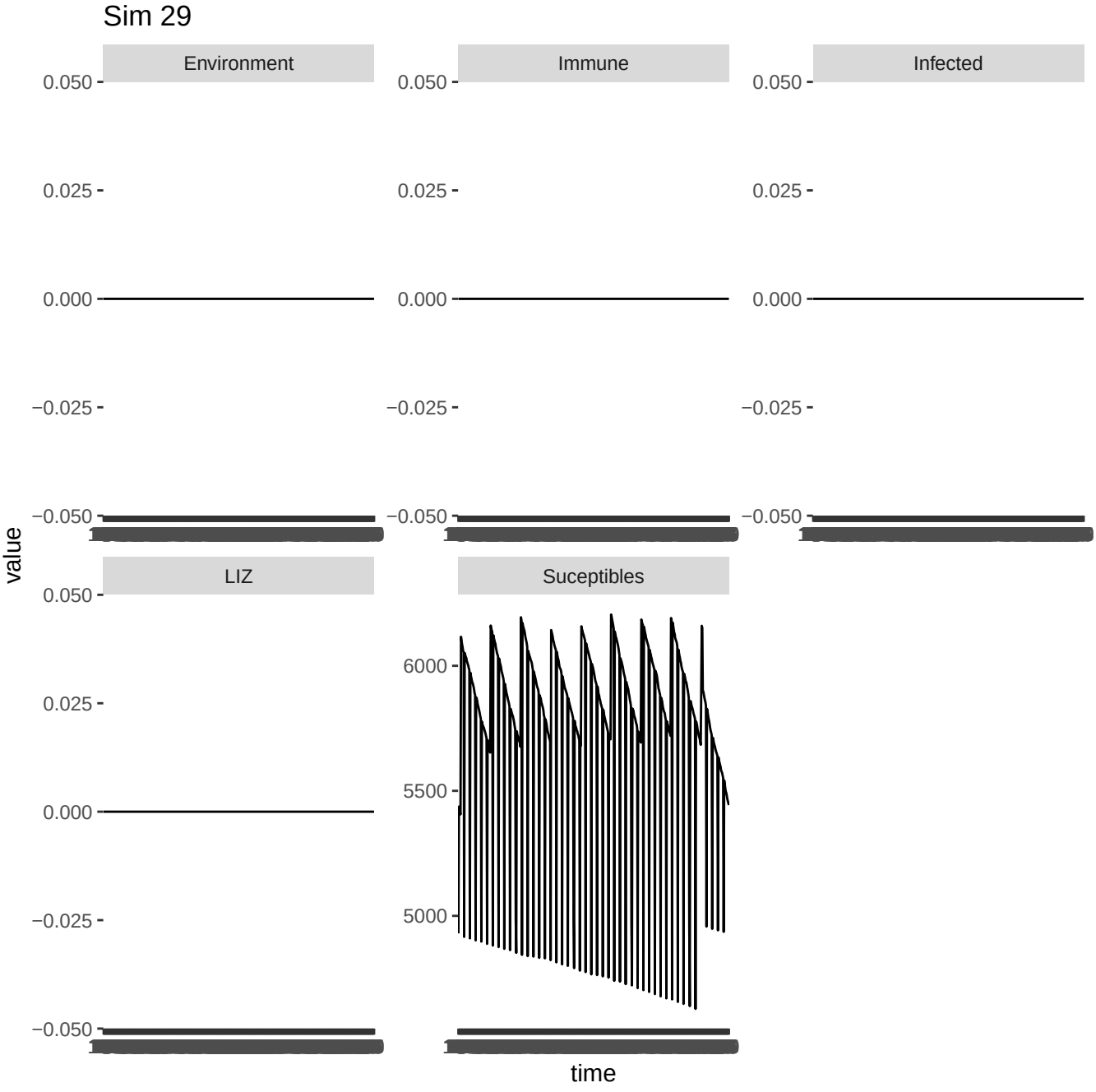
Sim 26

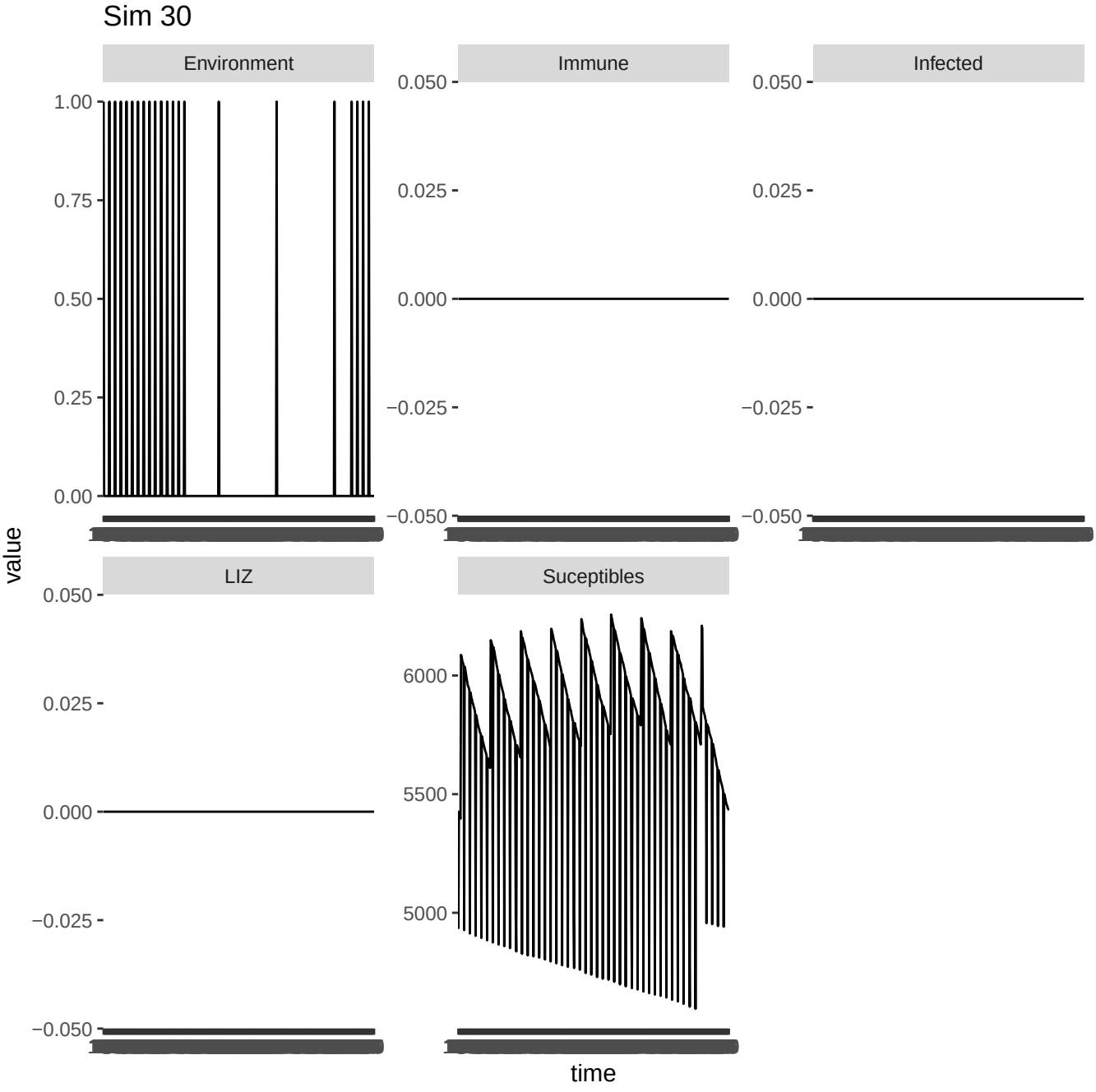

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
50
100
150
6000


Sim 27
Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

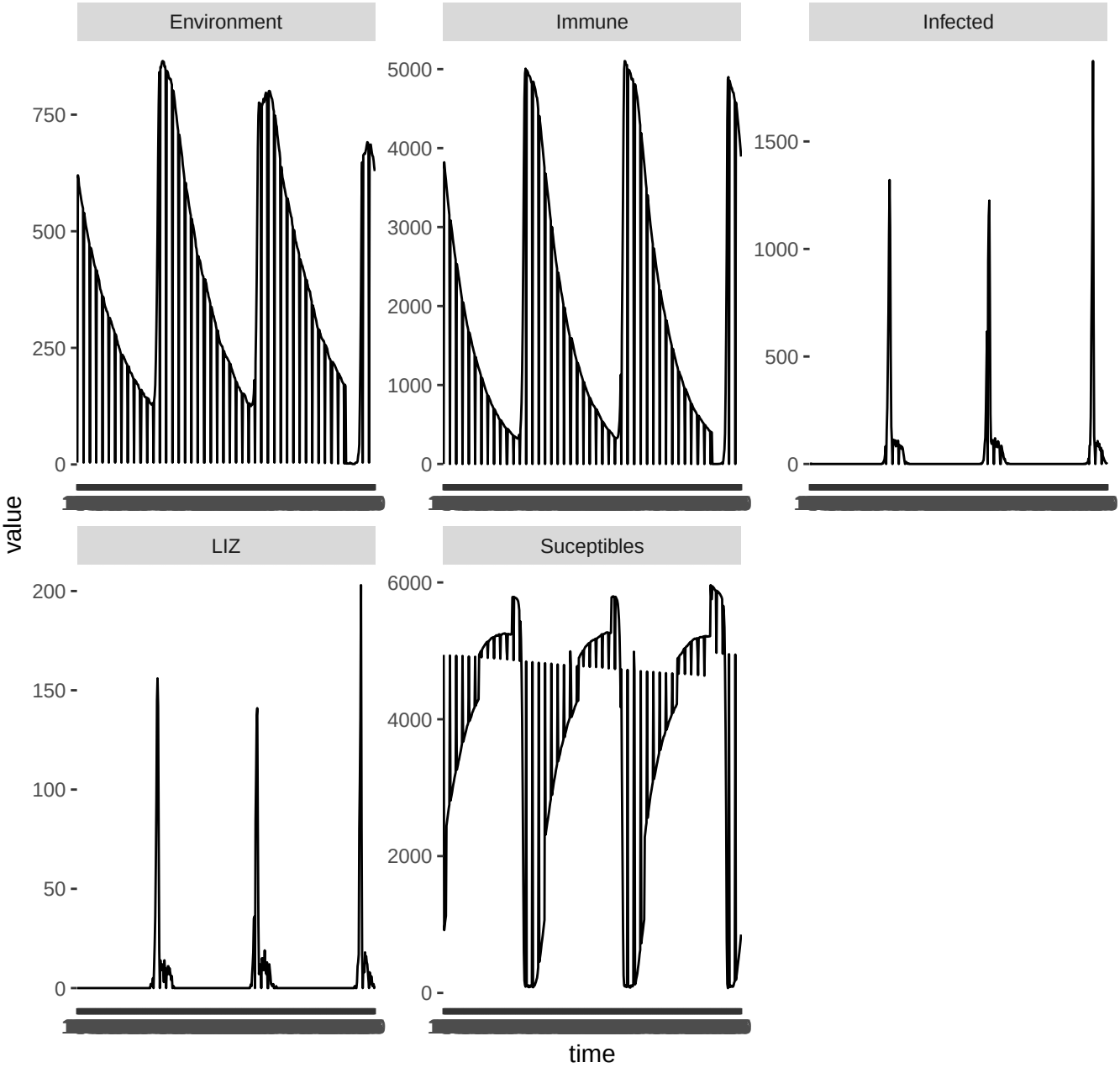
Sim 28


Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
150
100
50
0
6000
4000
2000
0

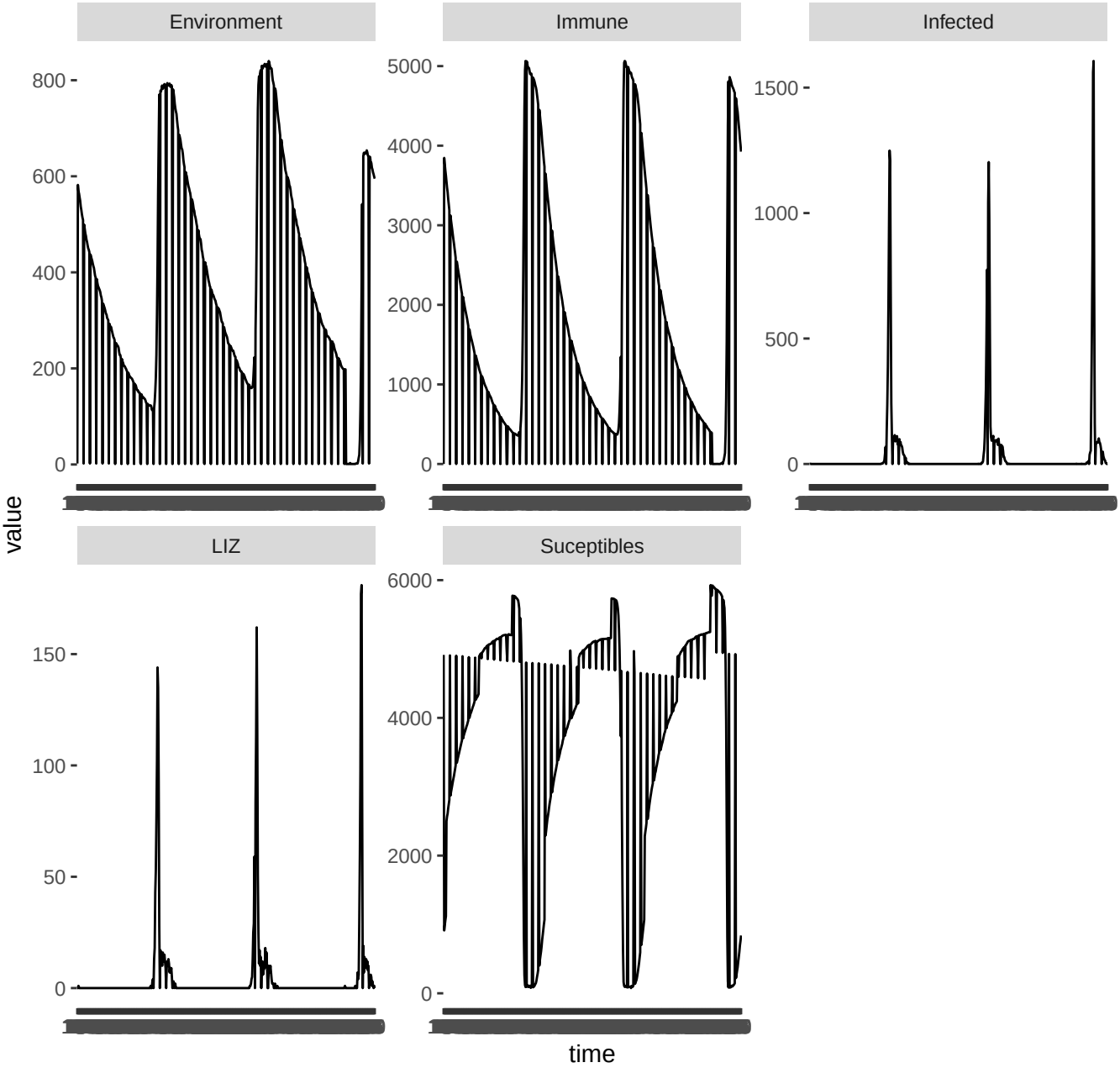

Sim 29
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time


Sim 30
Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

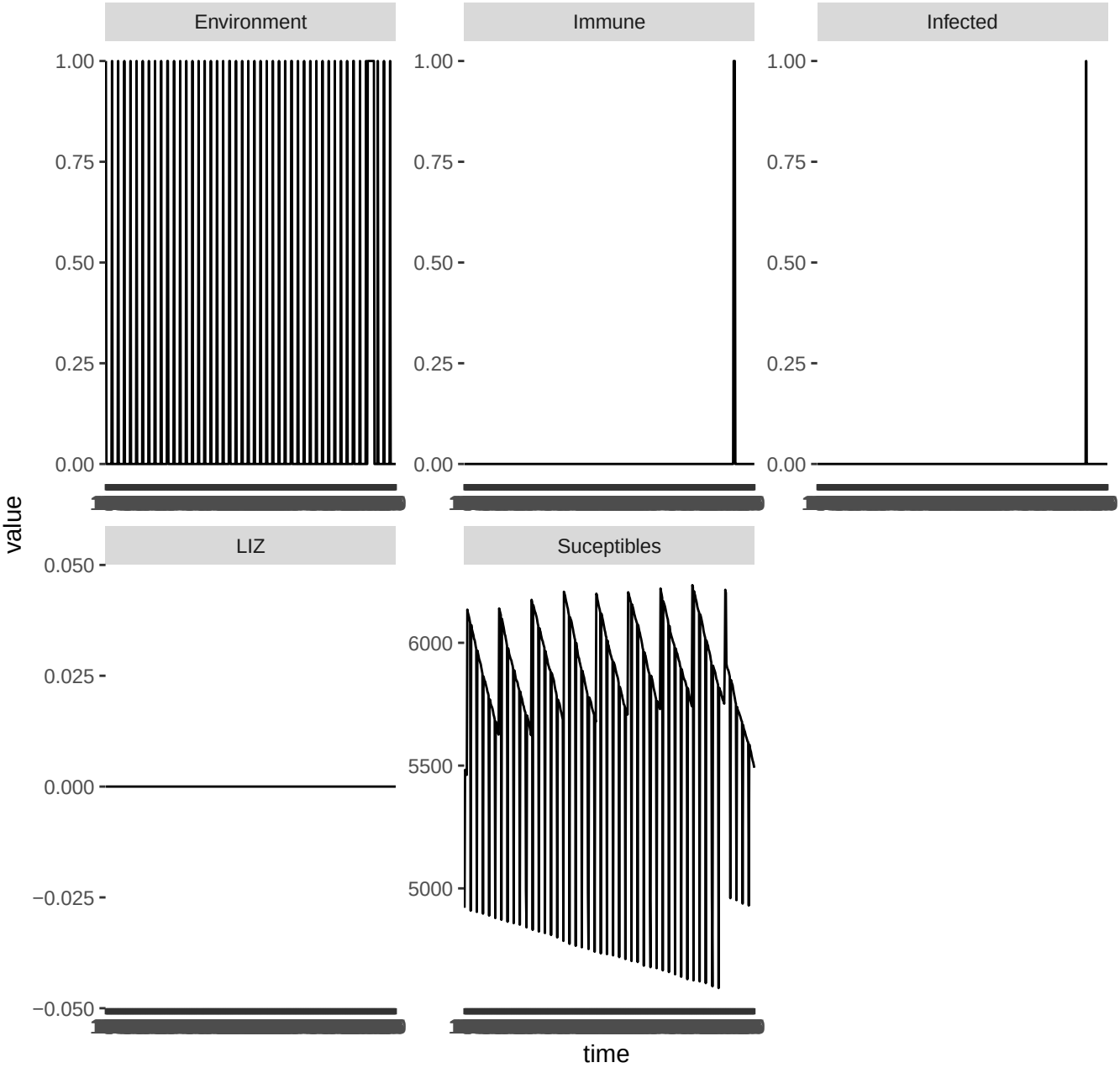
Sim 31


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150
200

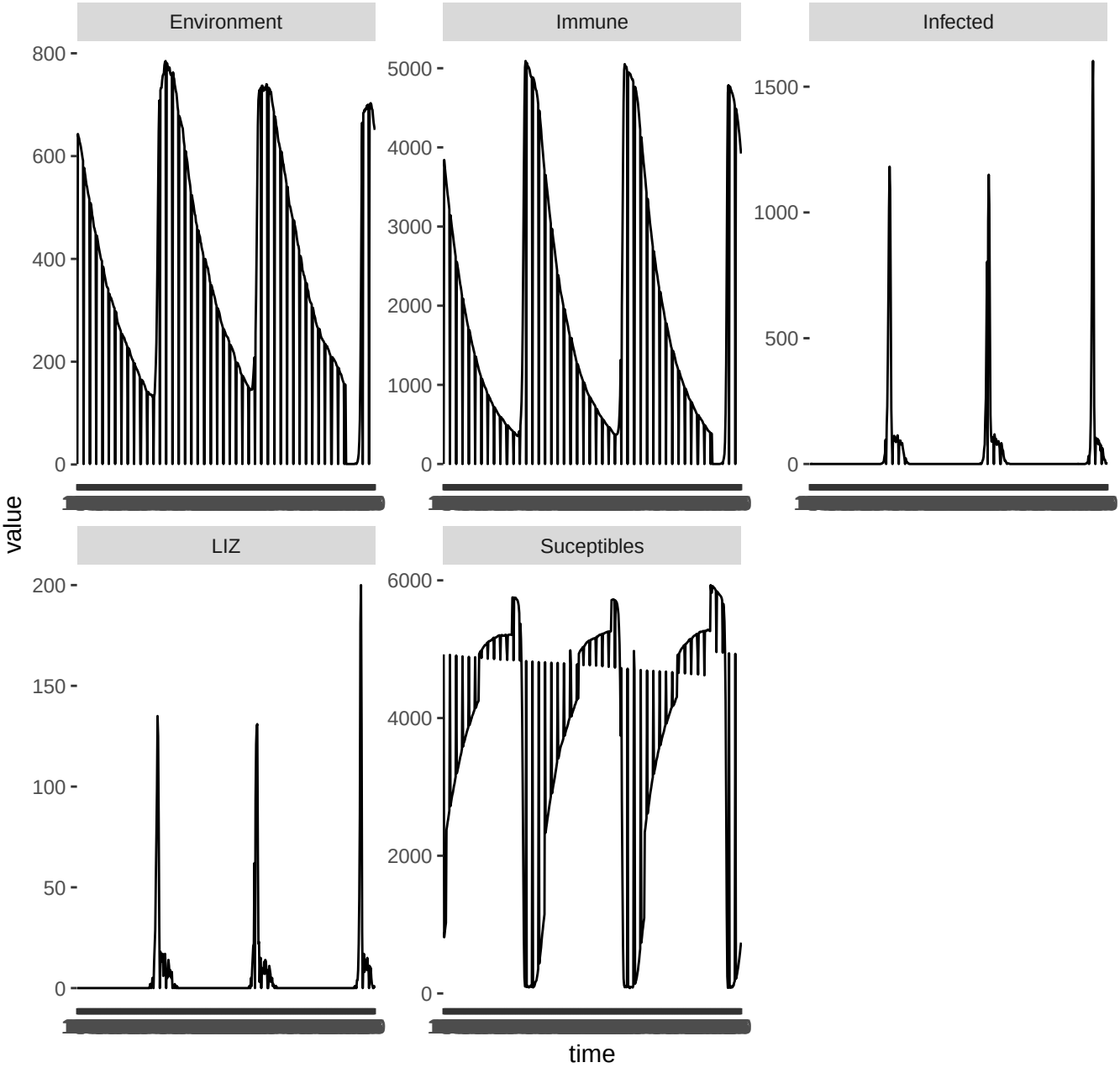
Sim 32

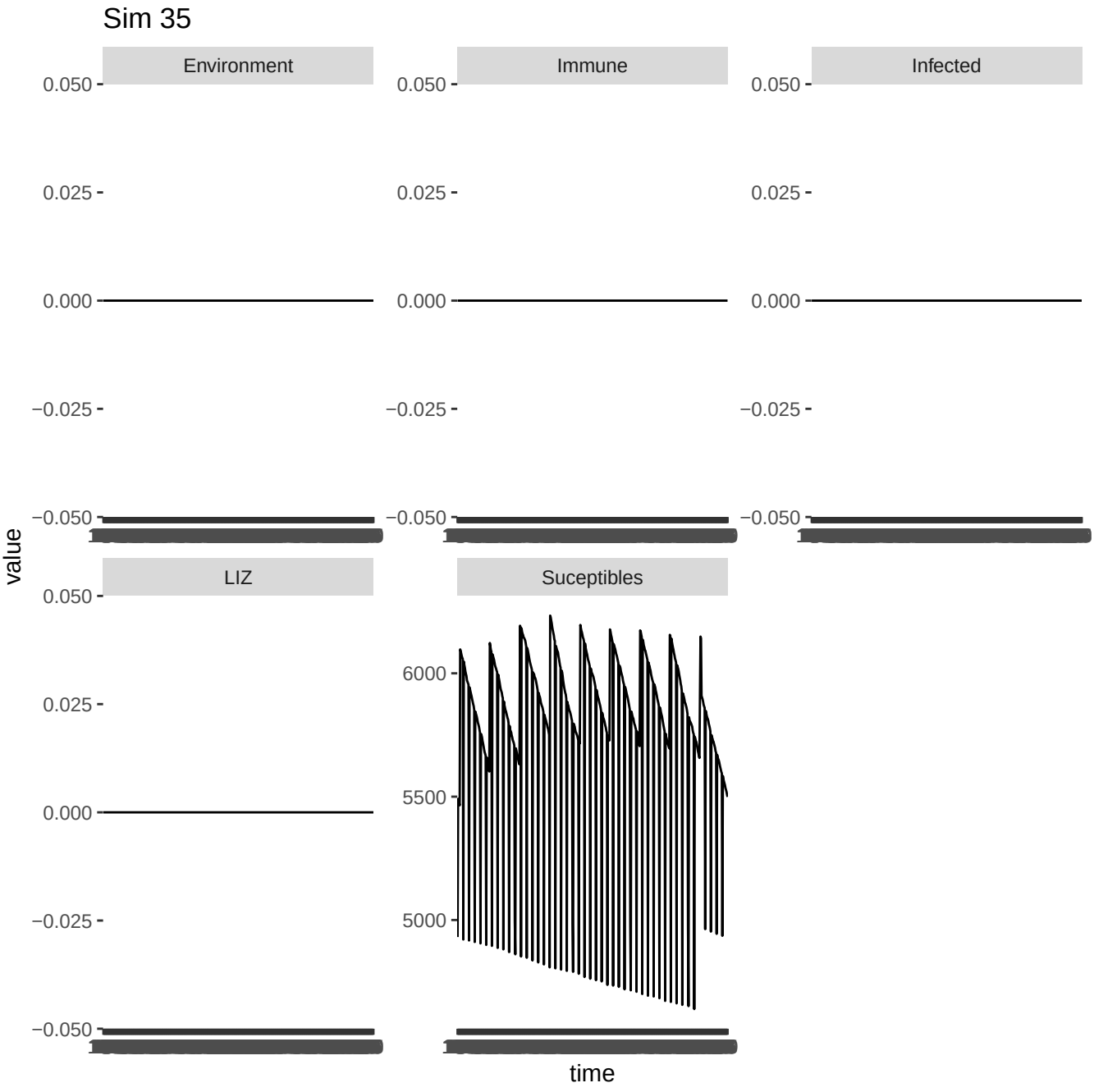

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

Sim 33

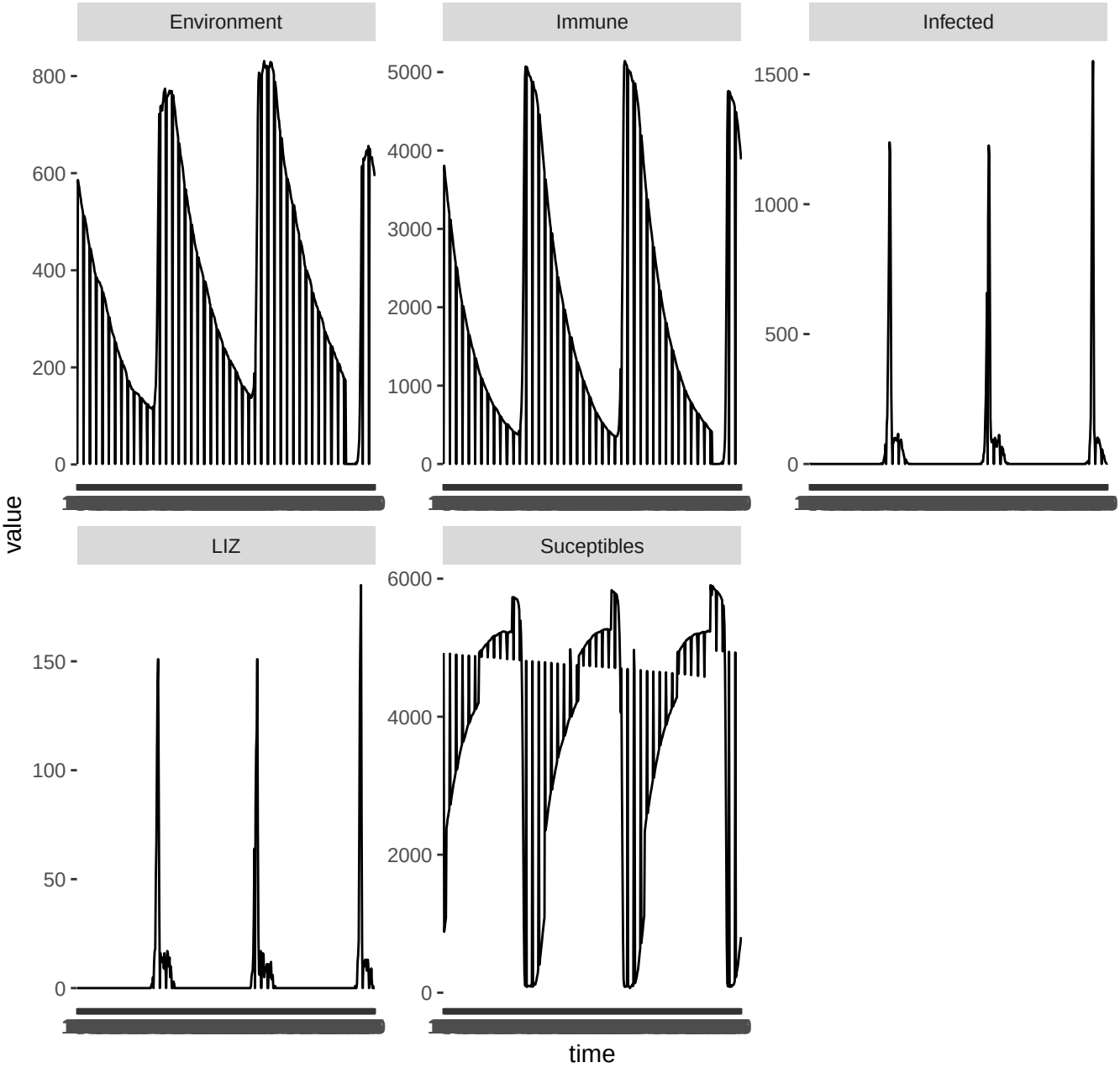

Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

Sim 34

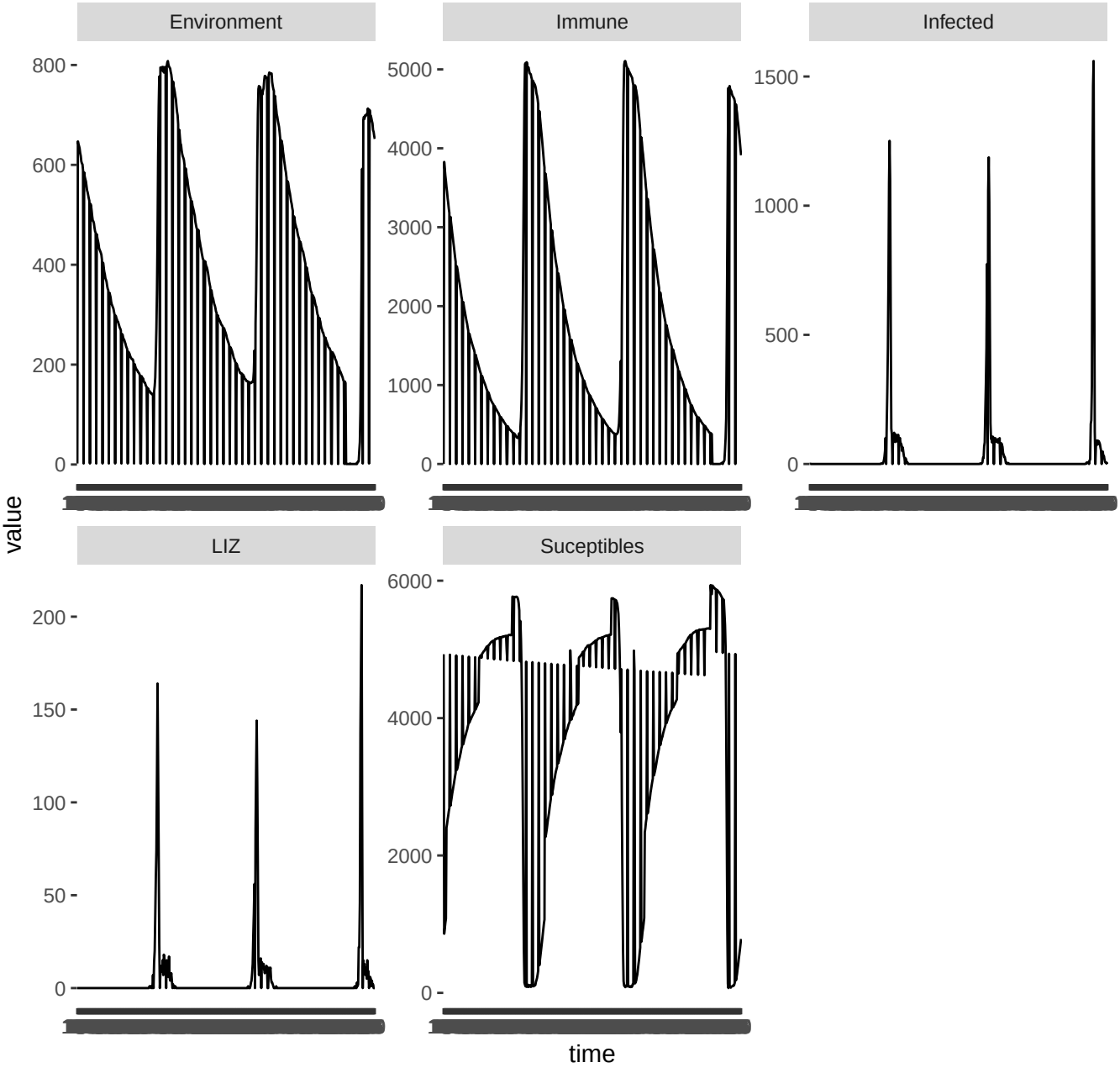

Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
200
150
100
50
0
6000
4000
2000
0

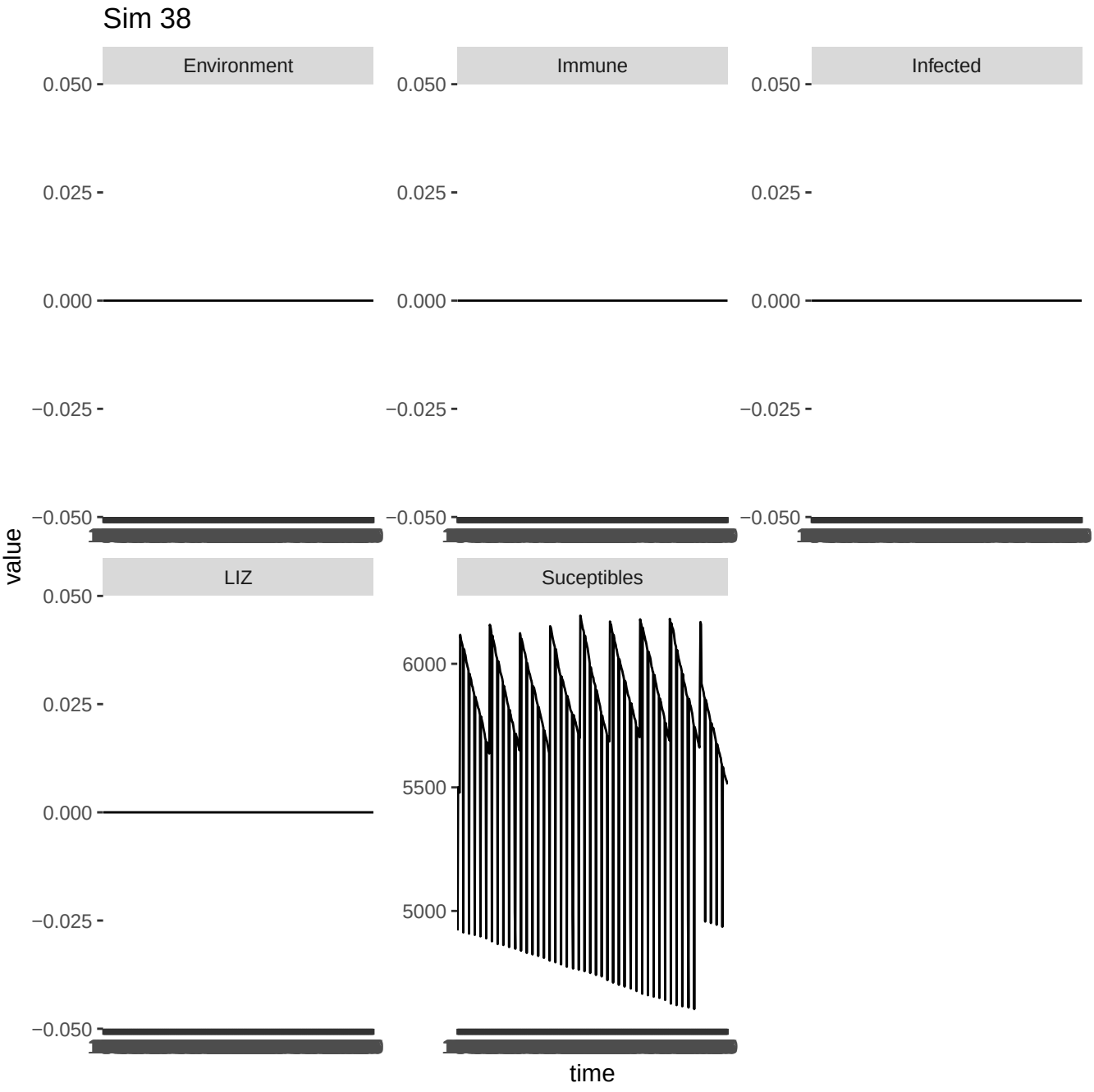

Sim 35
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

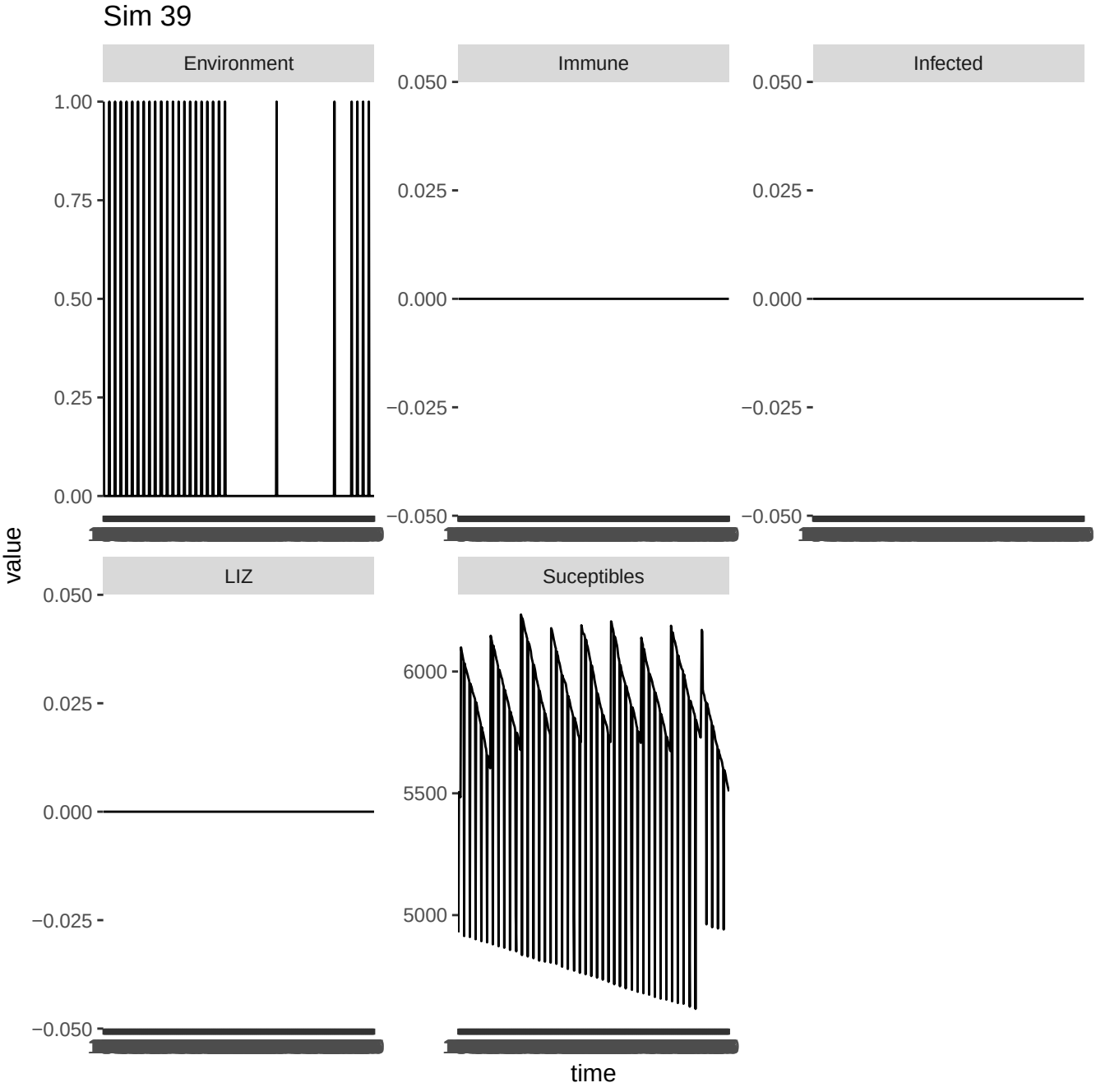
Sim 36


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

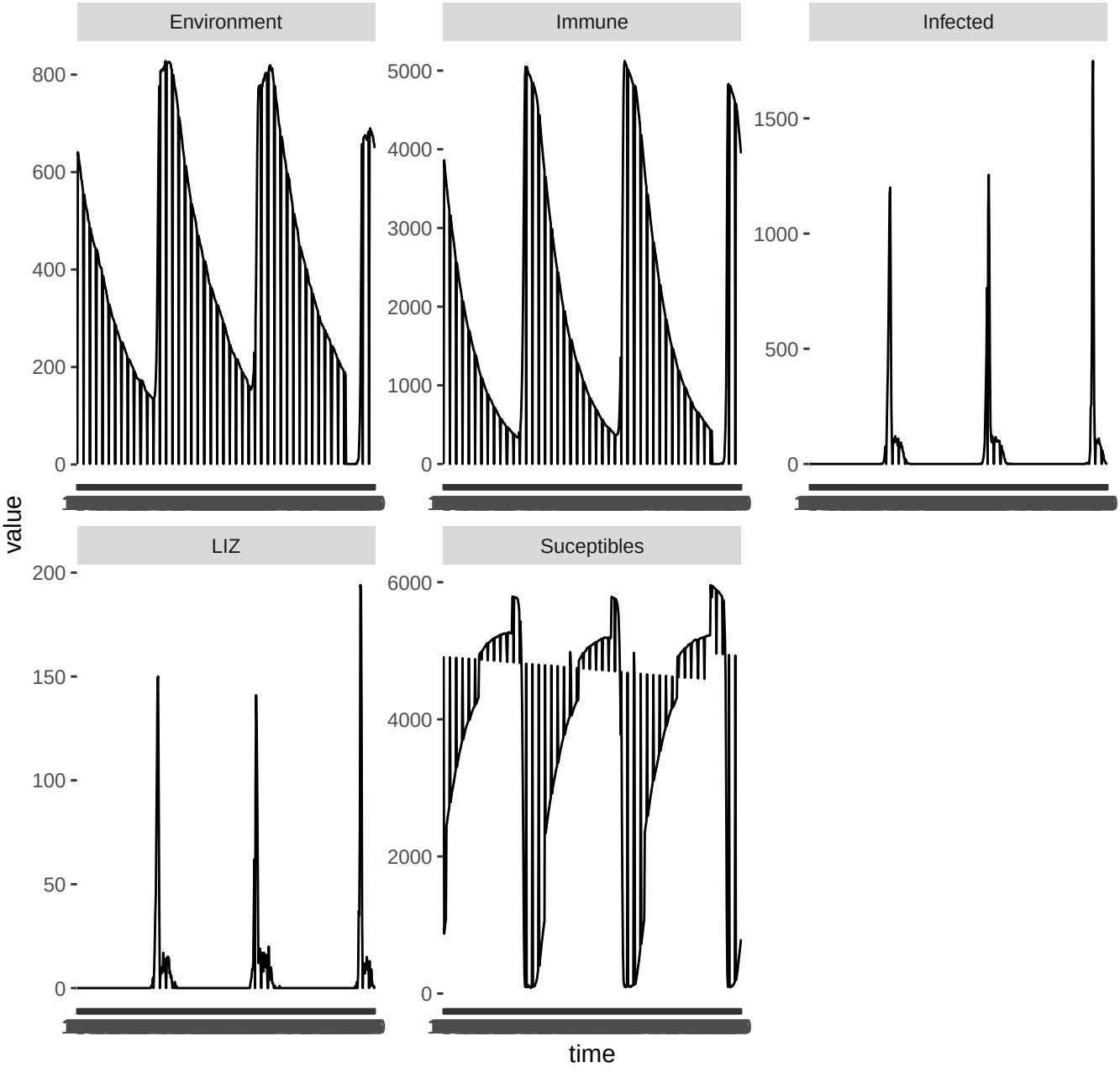
Sim 37

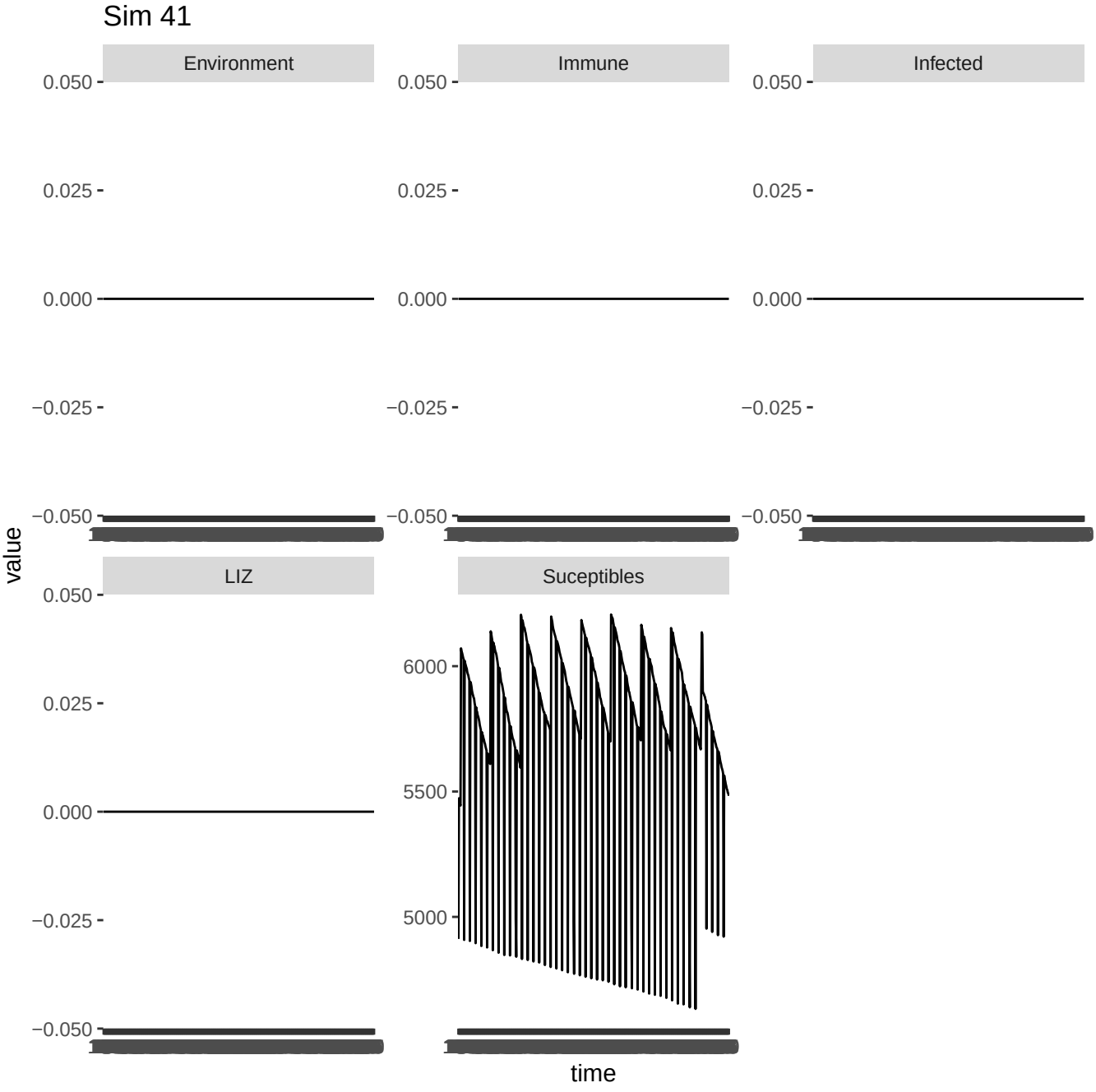

Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
200
150
100
50
0
6000
4000
2000
0

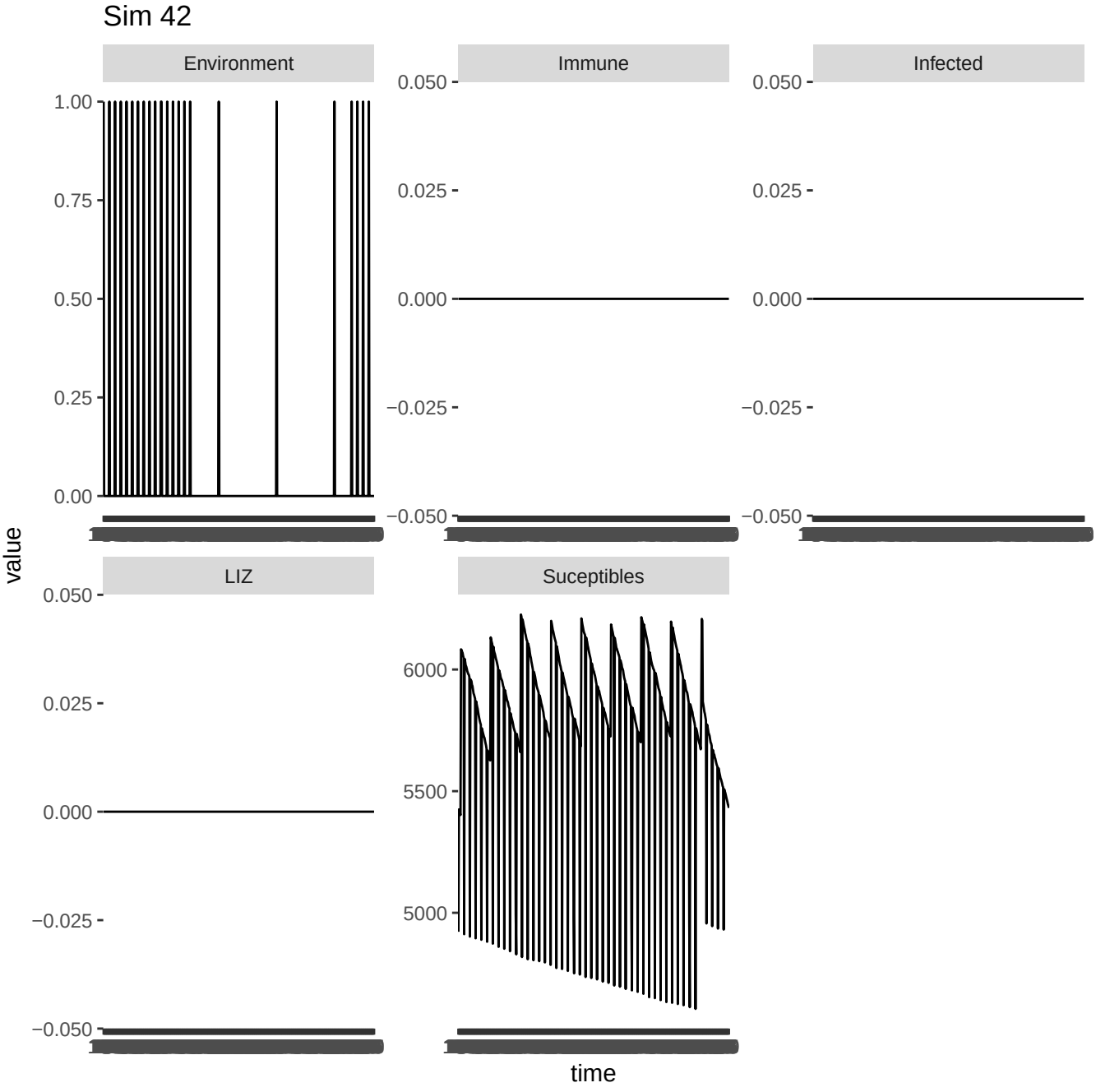

Sim 38
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time


Sim 39
Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

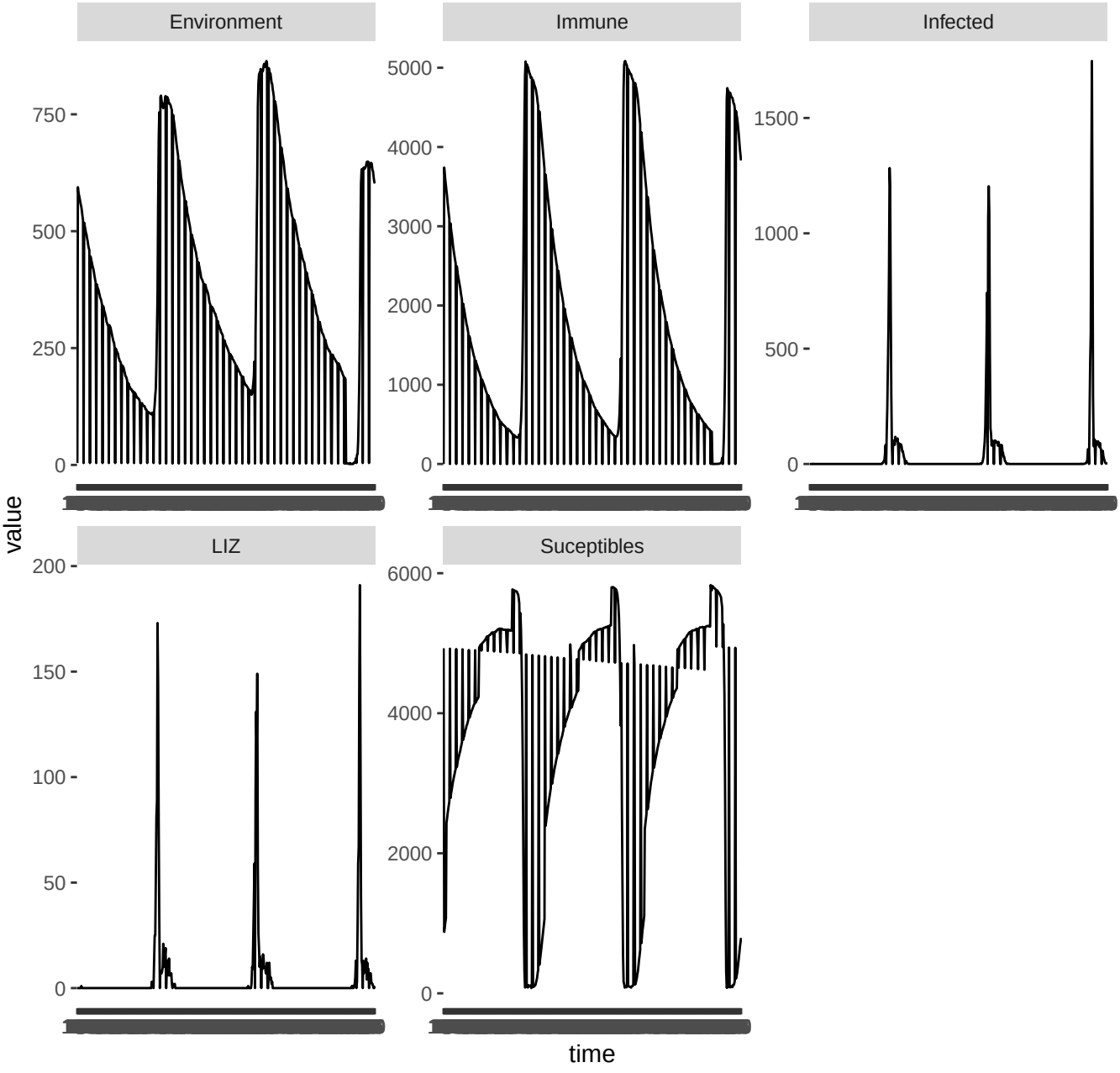
Sim 40

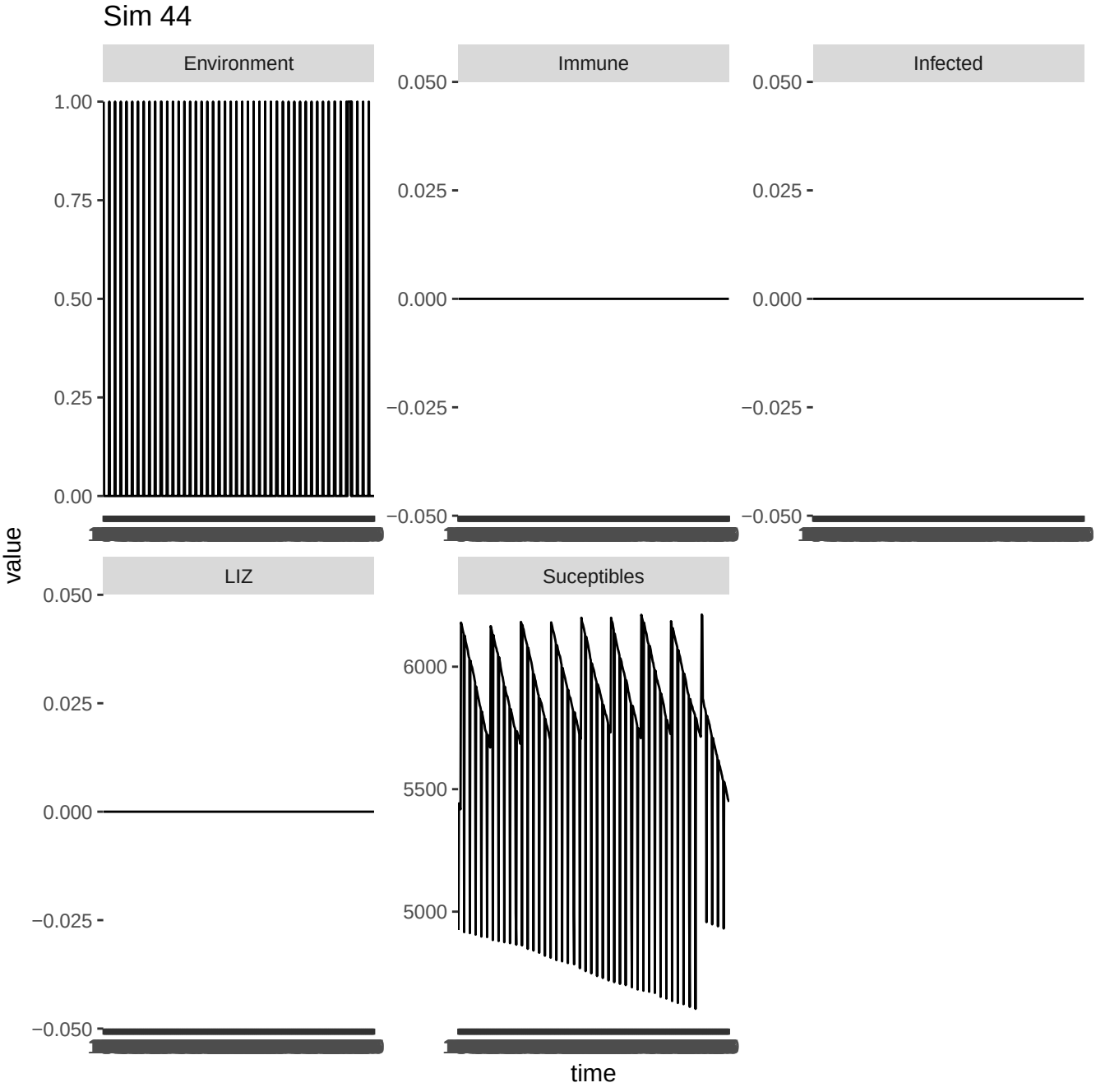

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000


Sim 41
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

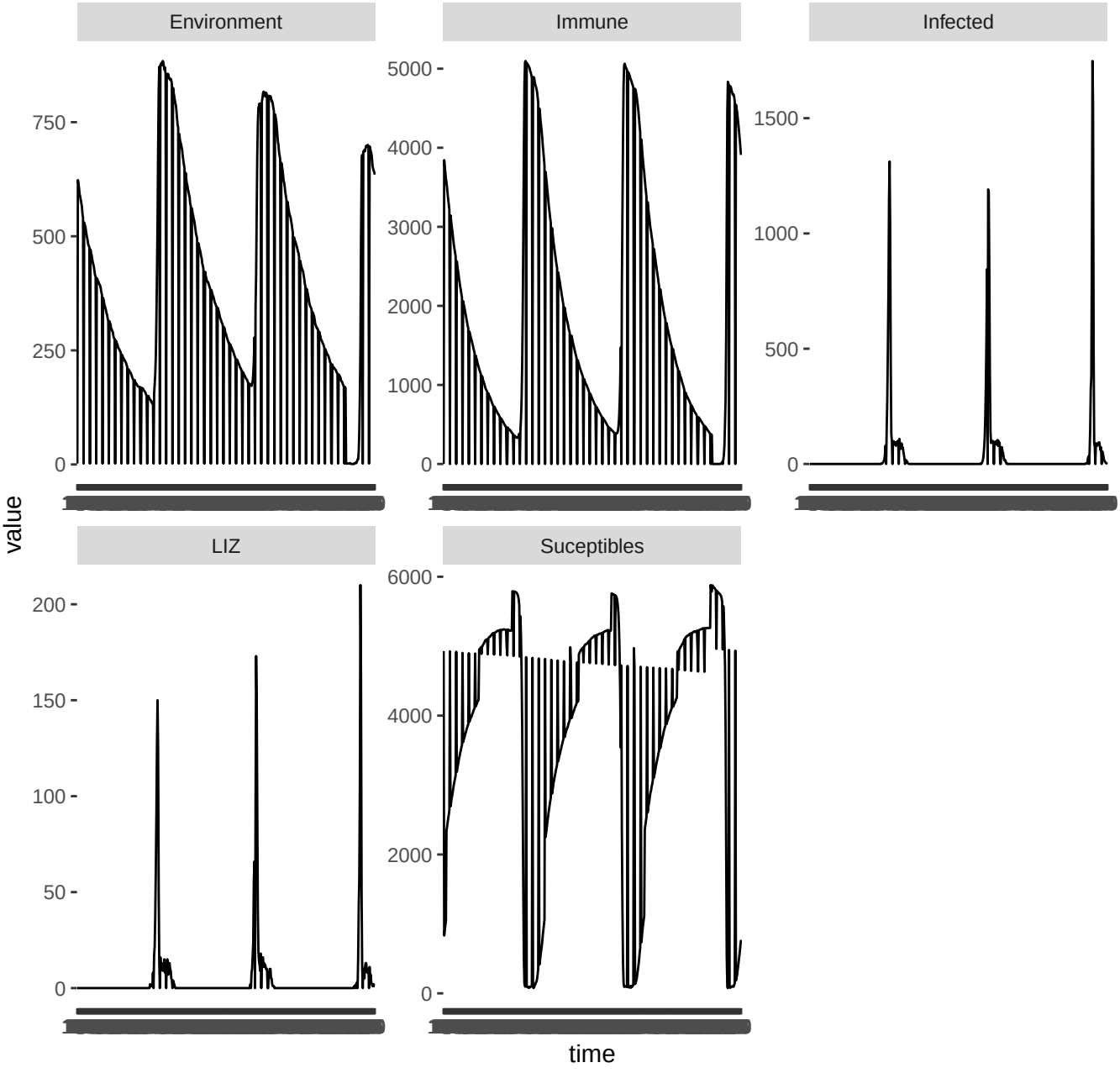

Sim 42
Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

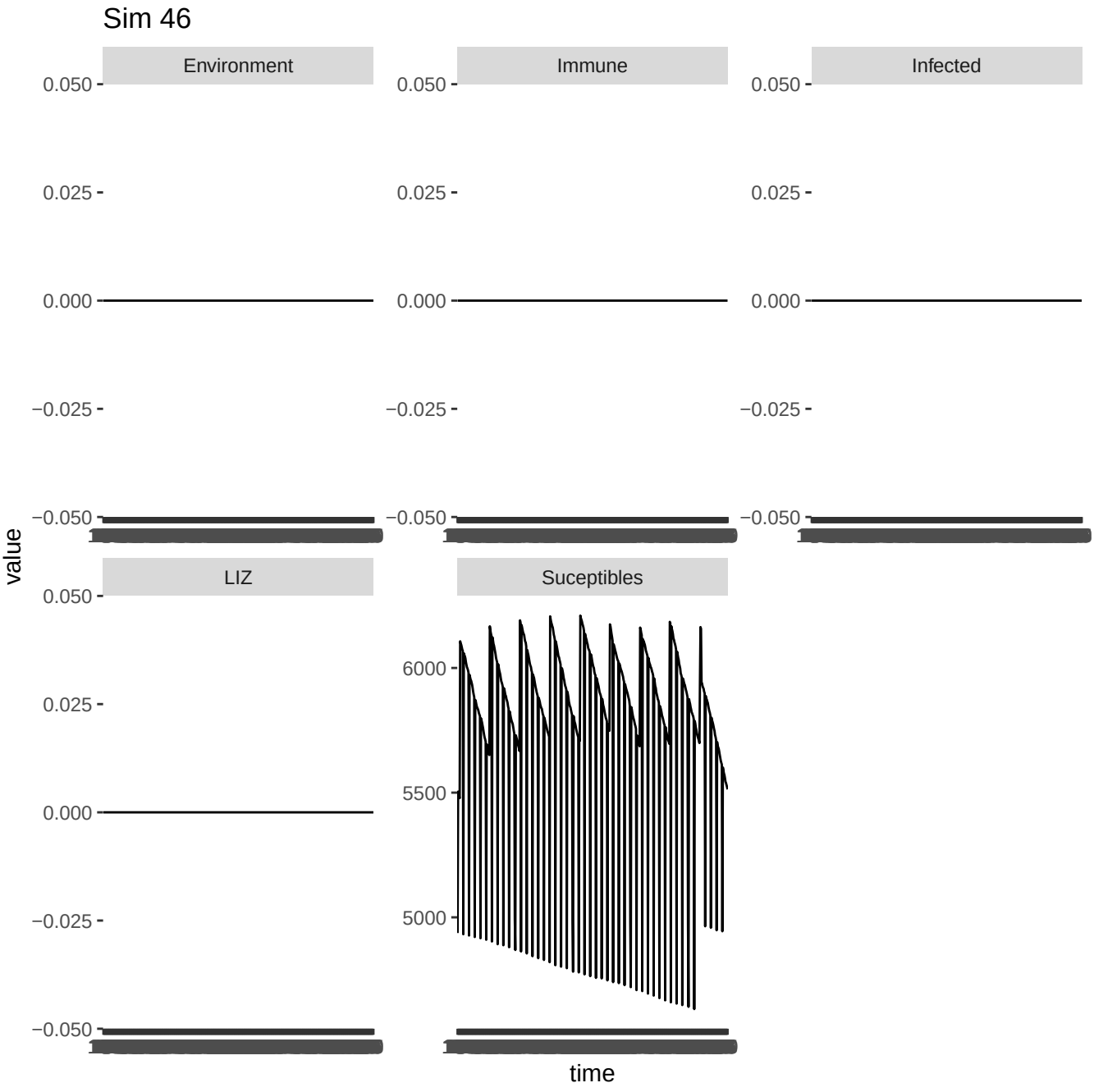
Sim 43


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150
200

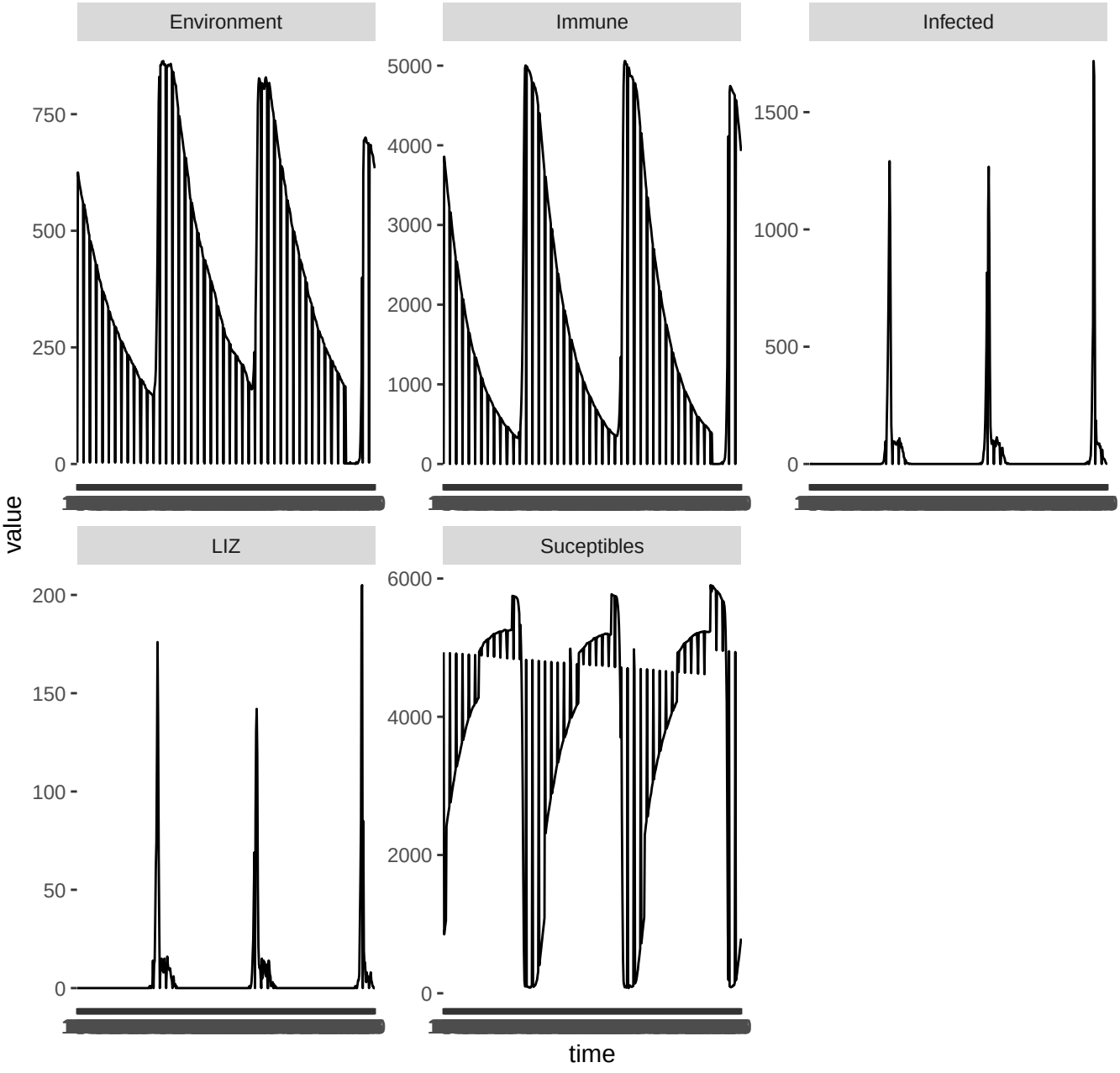

Sim 44
Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

Sim 45

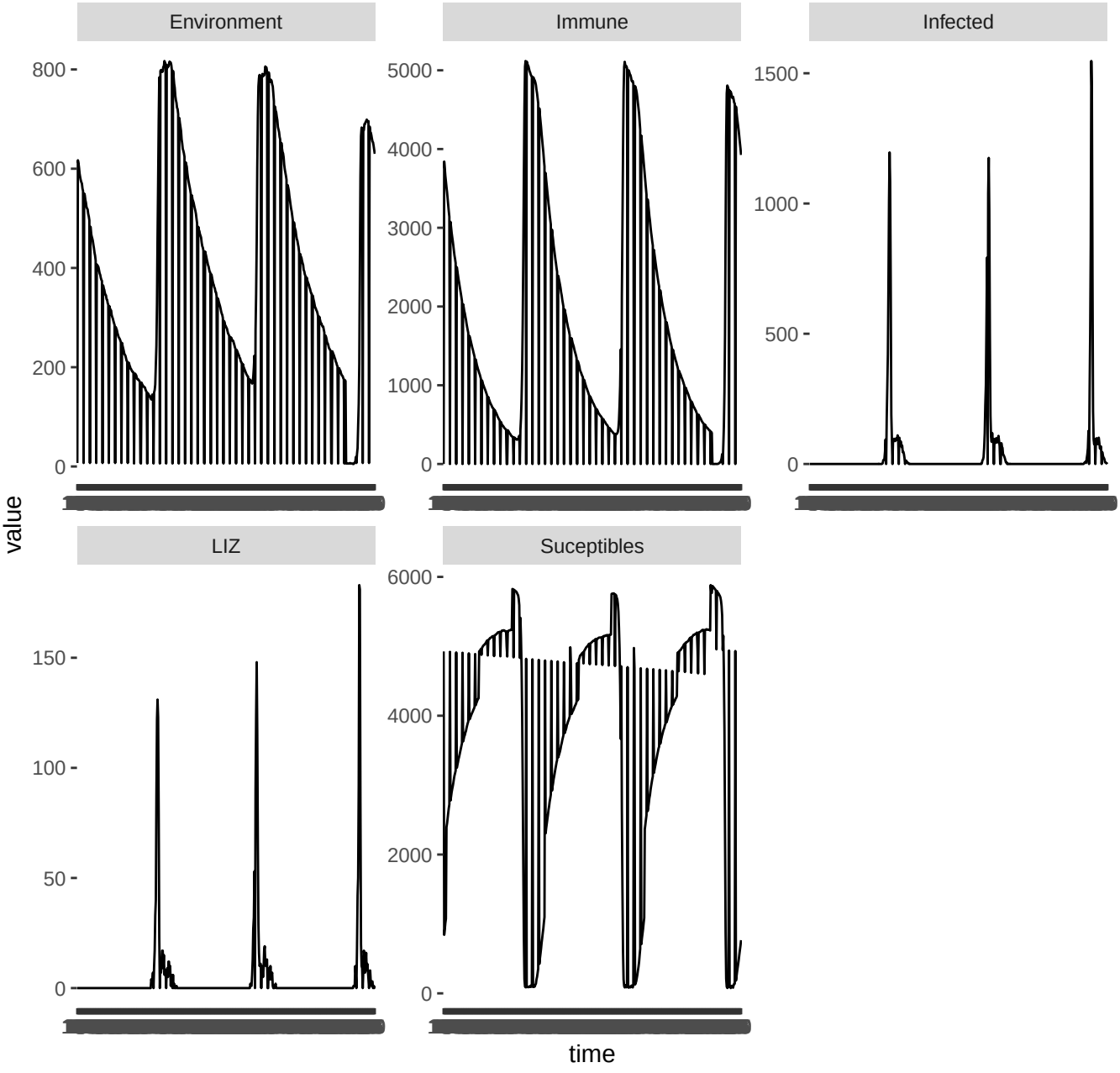

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150
200


Sim 46
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

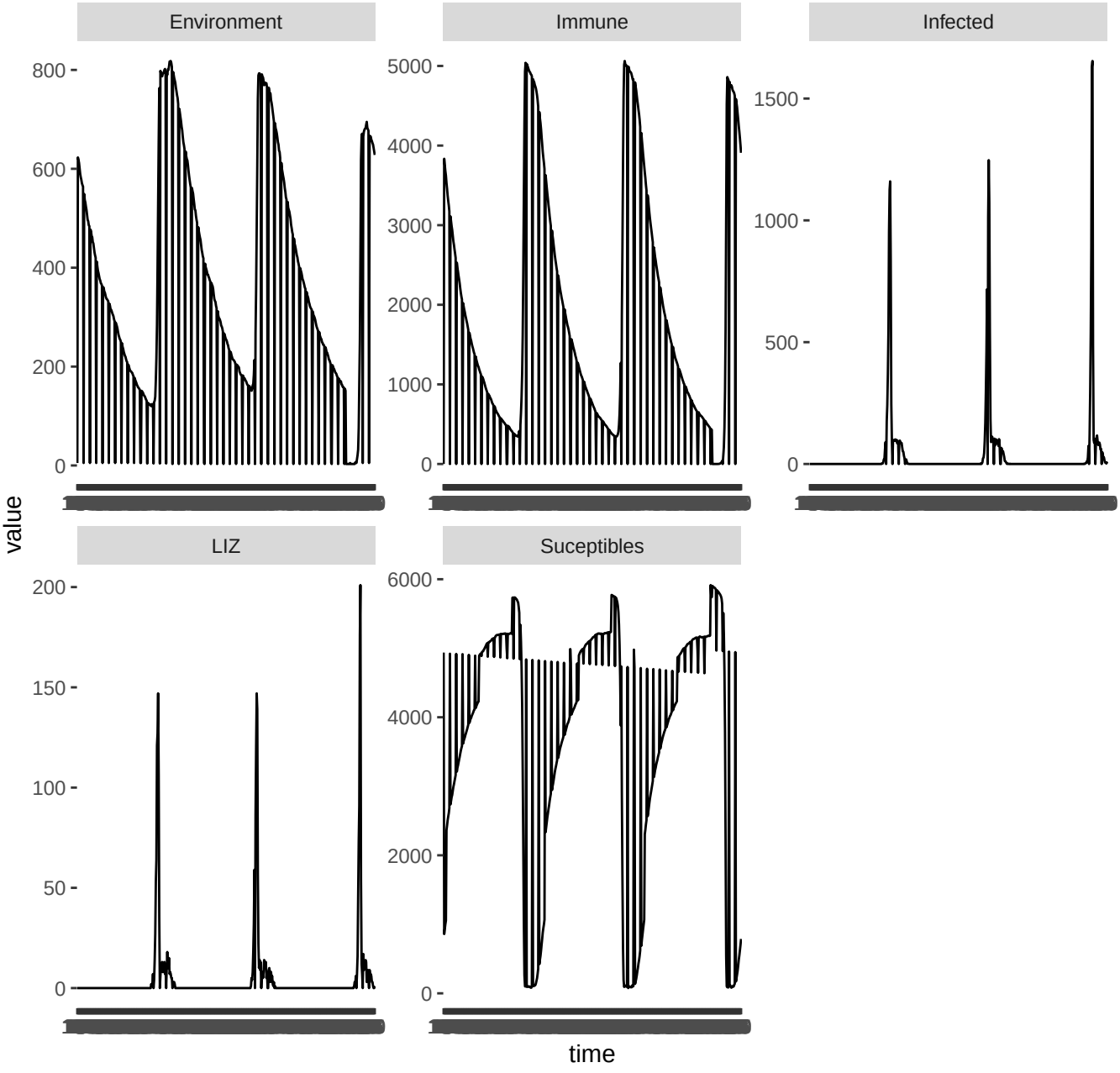
Sim 47


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150
200

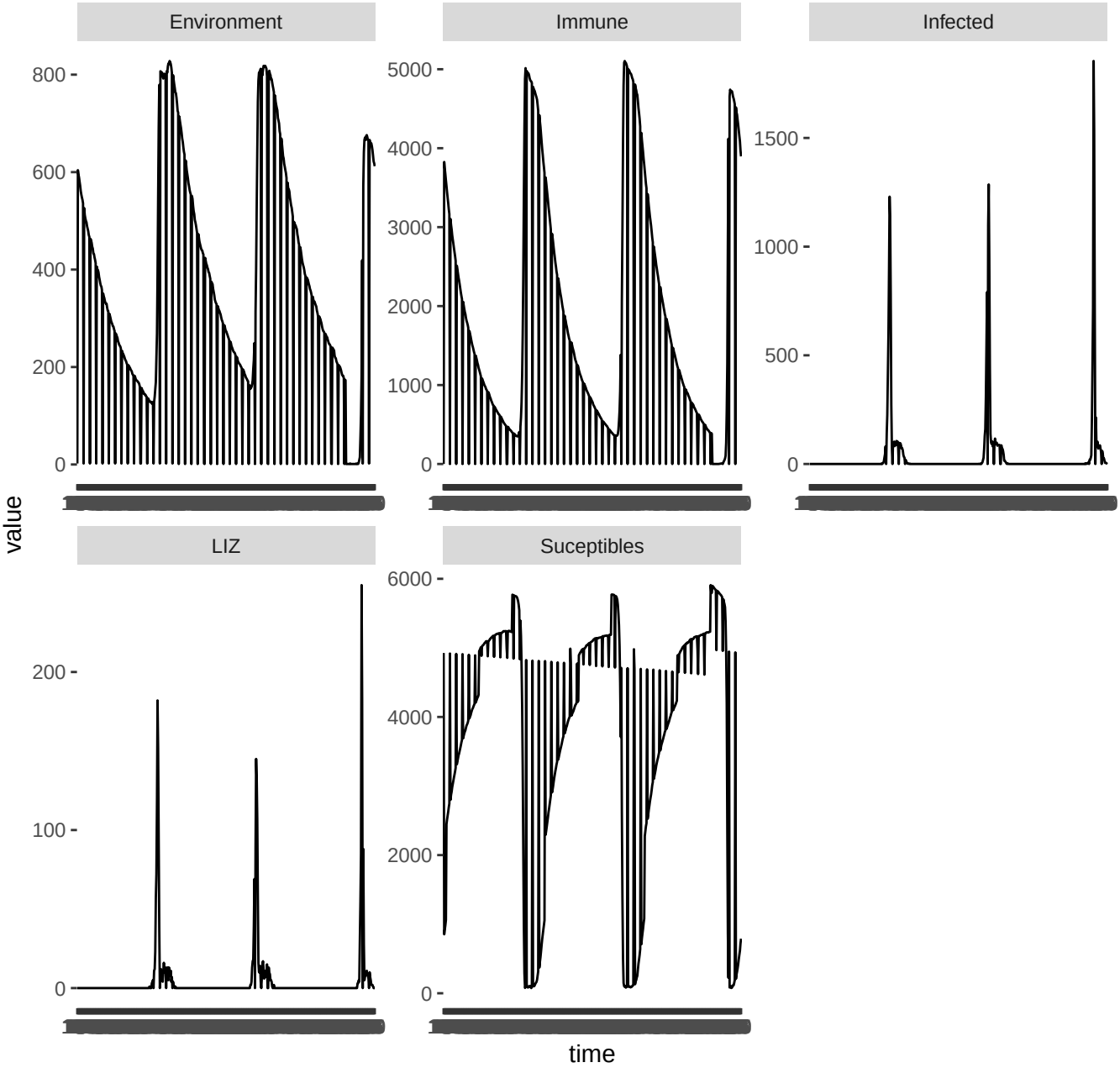
Sim 48


Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
150
100
50
0
6000
4000
2000
0

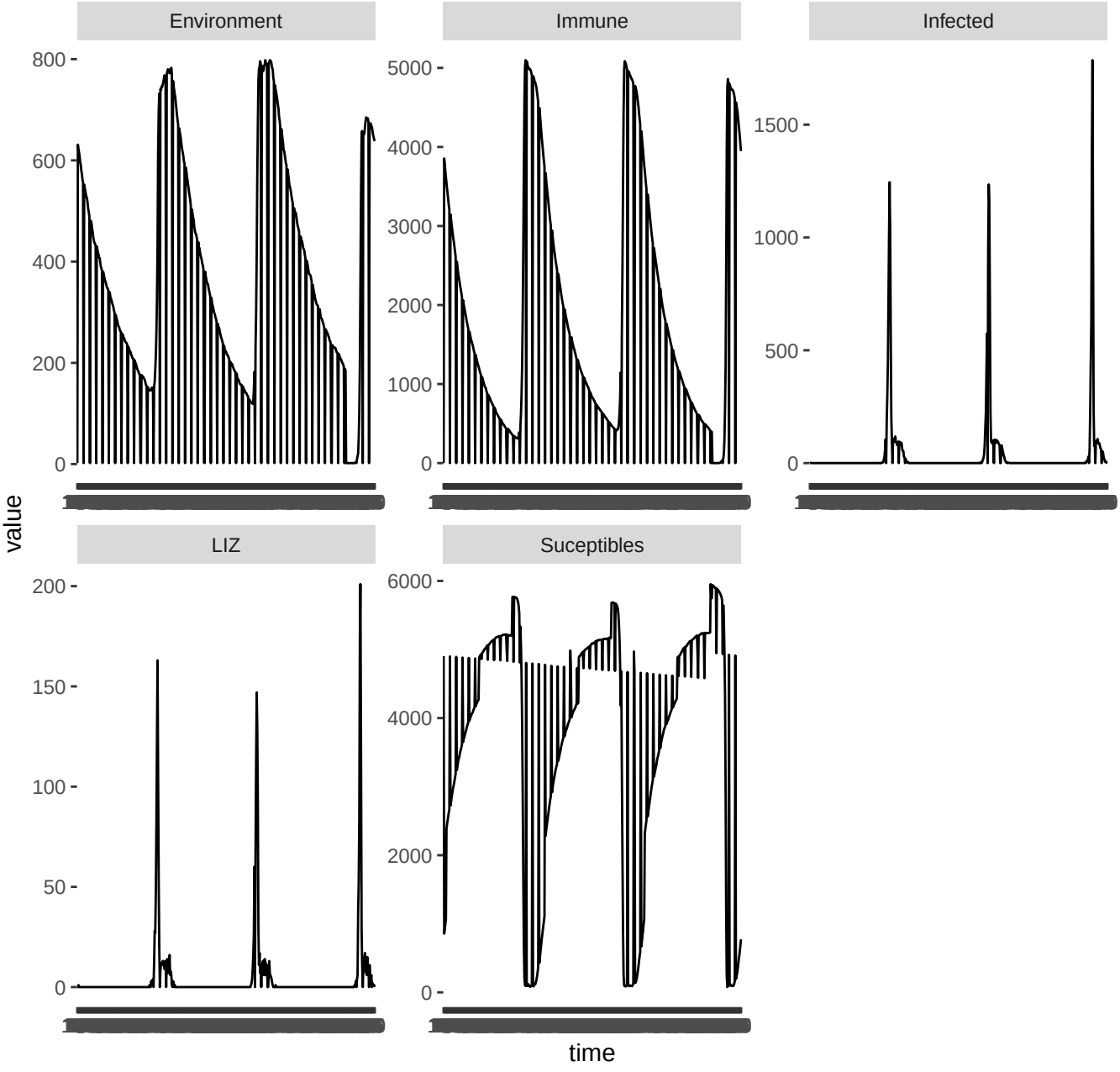
Sim 49


Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
200
150
100
50
0
6000
4000
2000
0

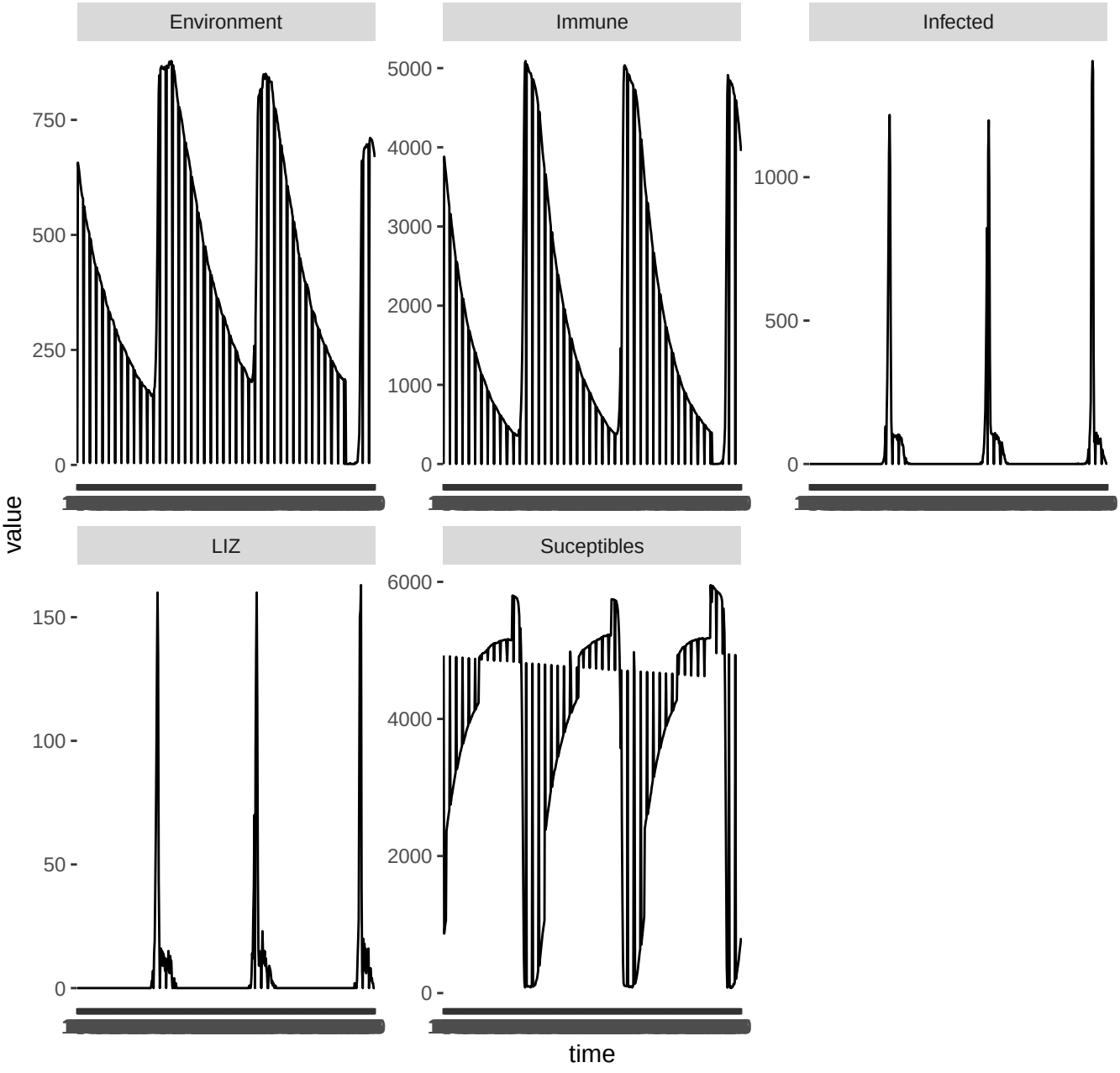
Sim 50


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
100
6000

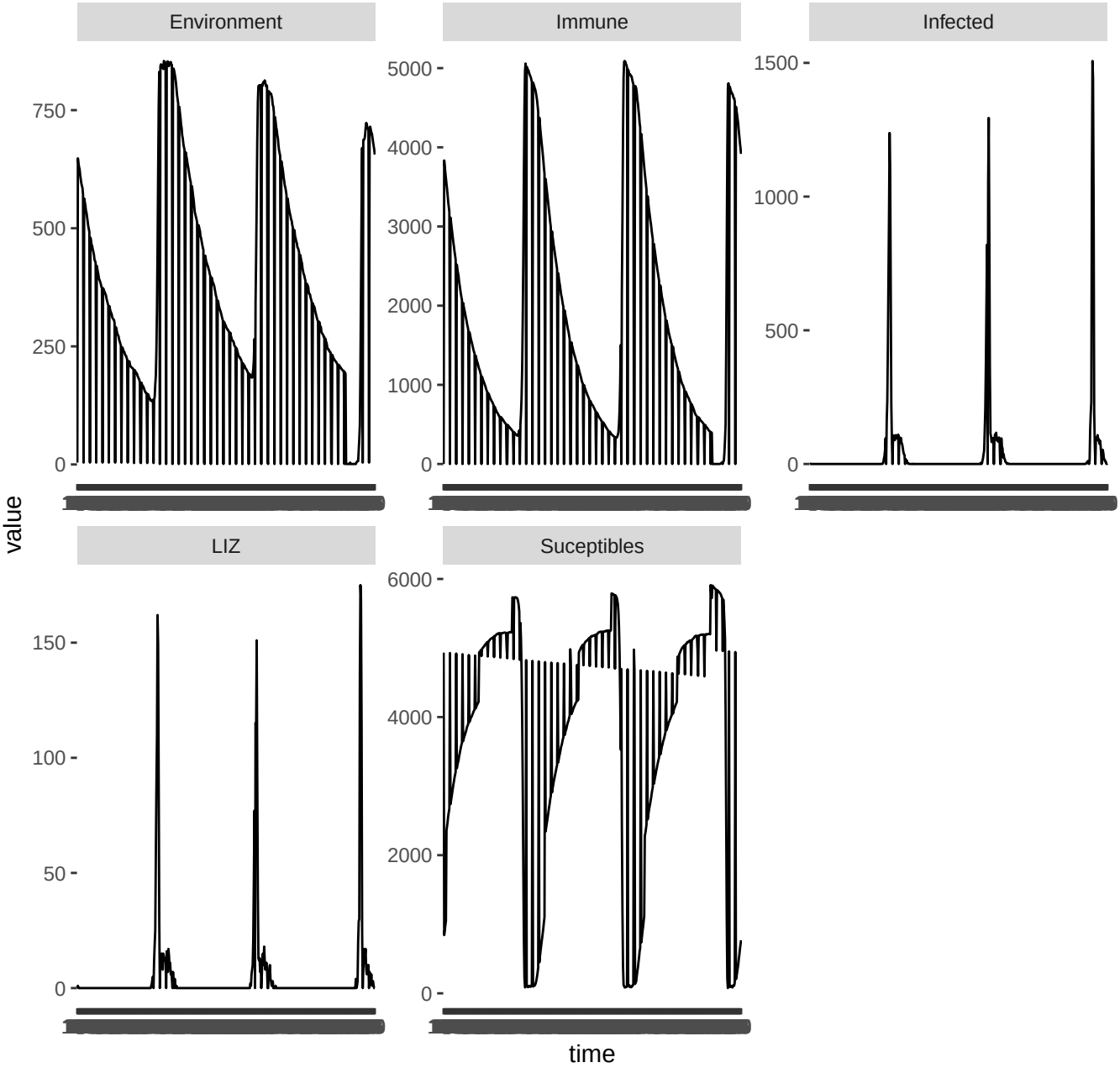
Sim 51


Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
200
150
100
50
0
6000
4000
2000
0

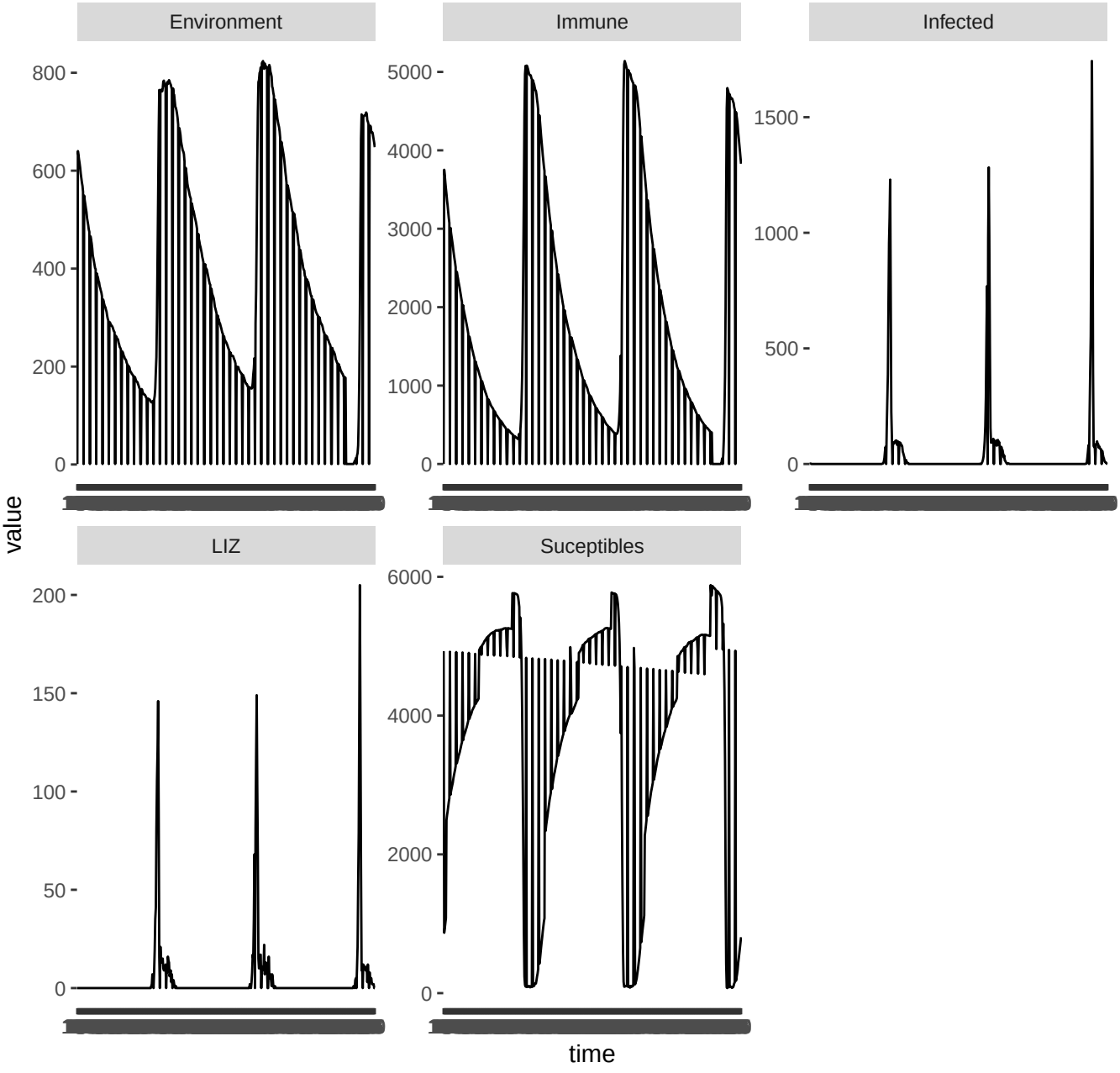
Sim 52


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
2000
3000
4000
5000
6000
50
100
150

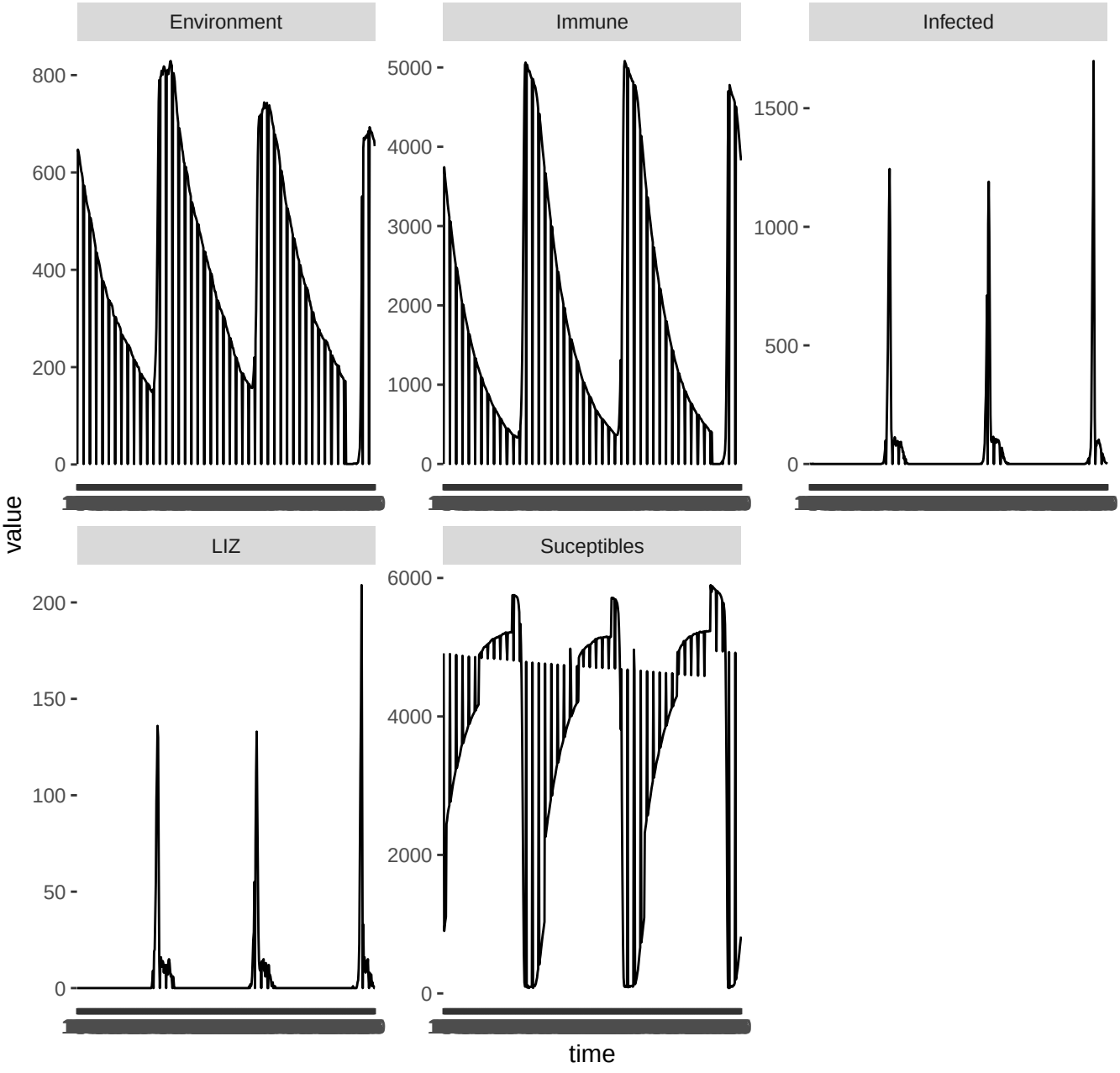
Sim 53


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
2000
3000
4000
5000
1500
50
100
150
6000

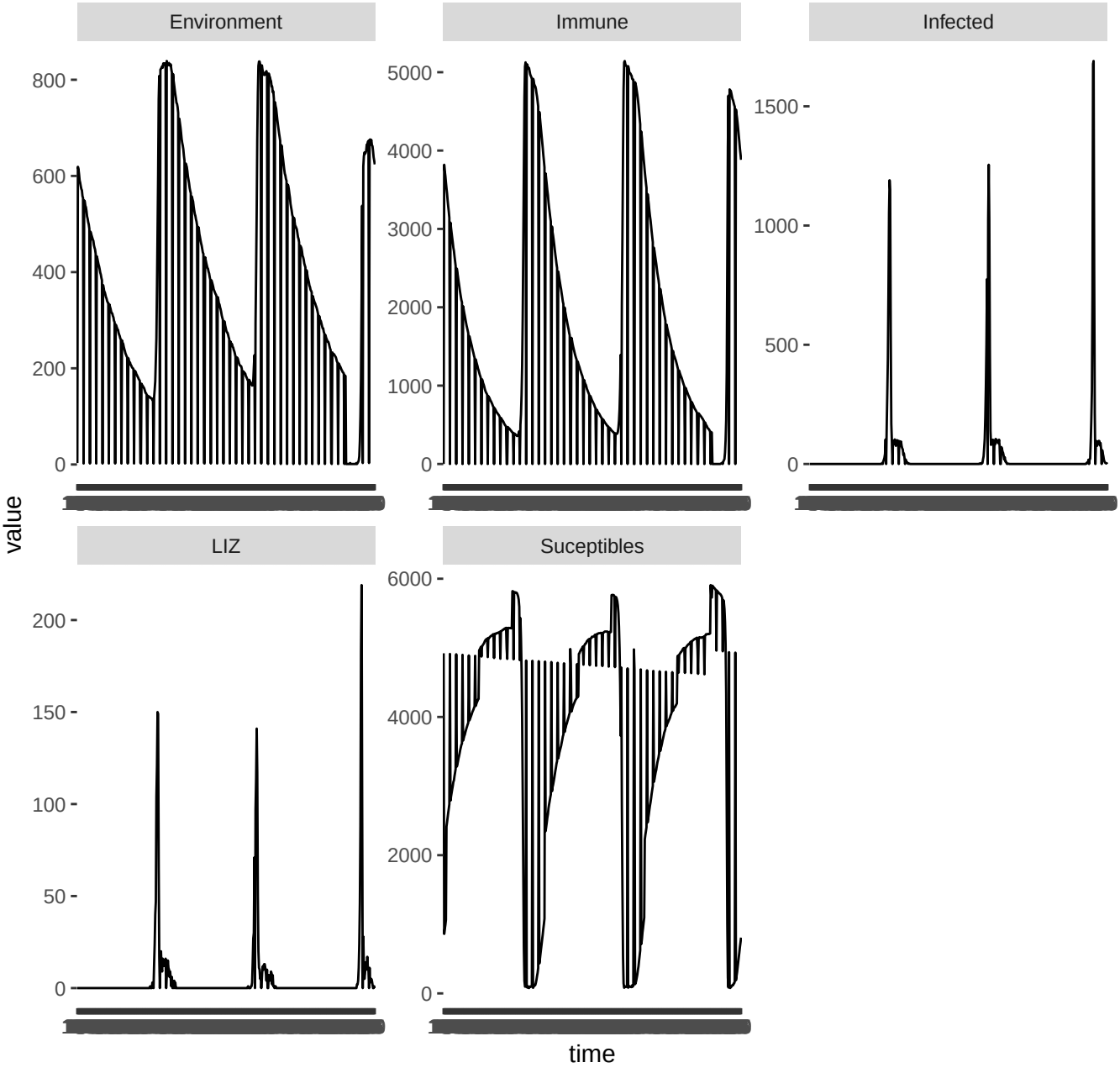
Sim 54


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

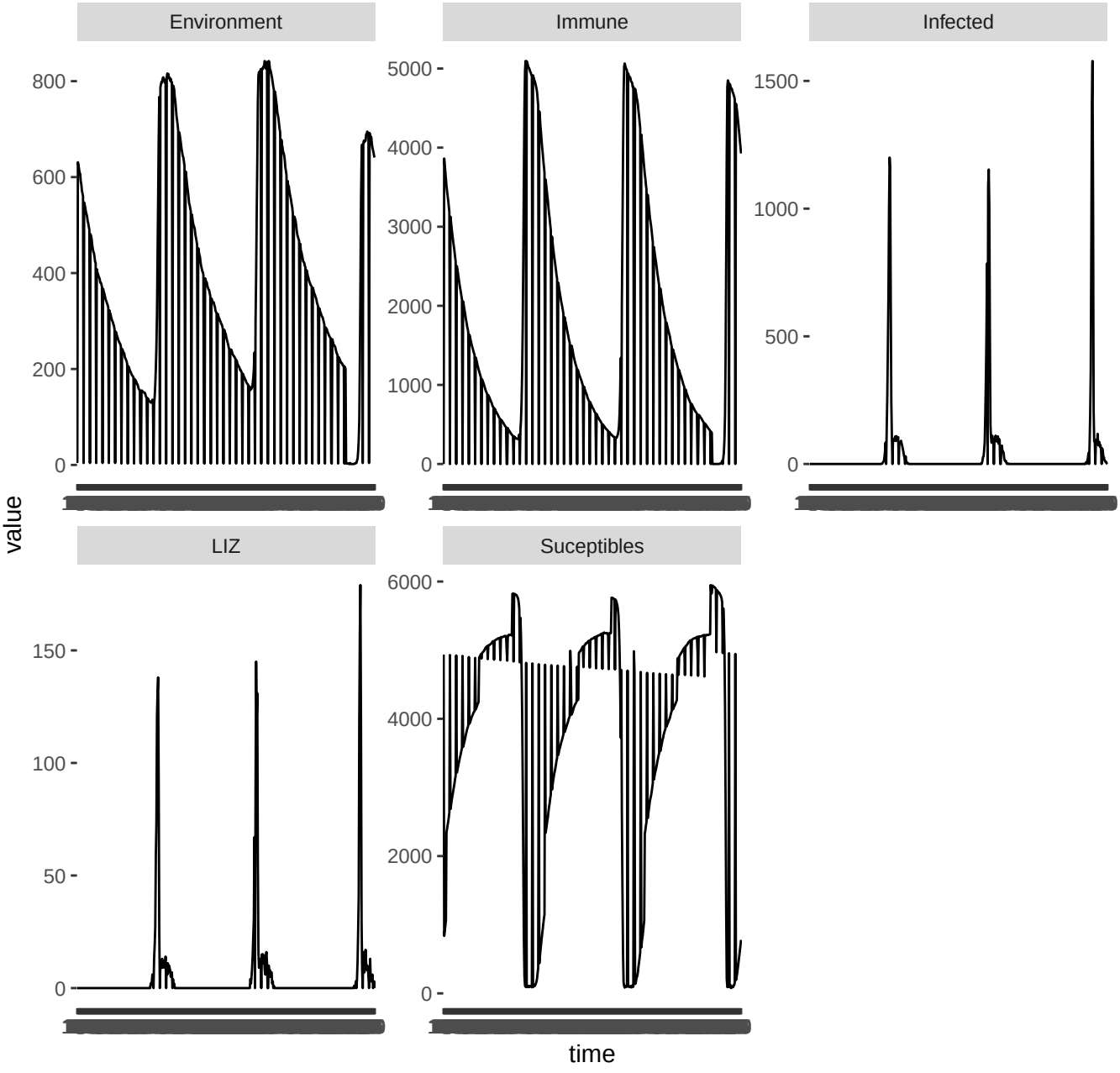
Sim 55

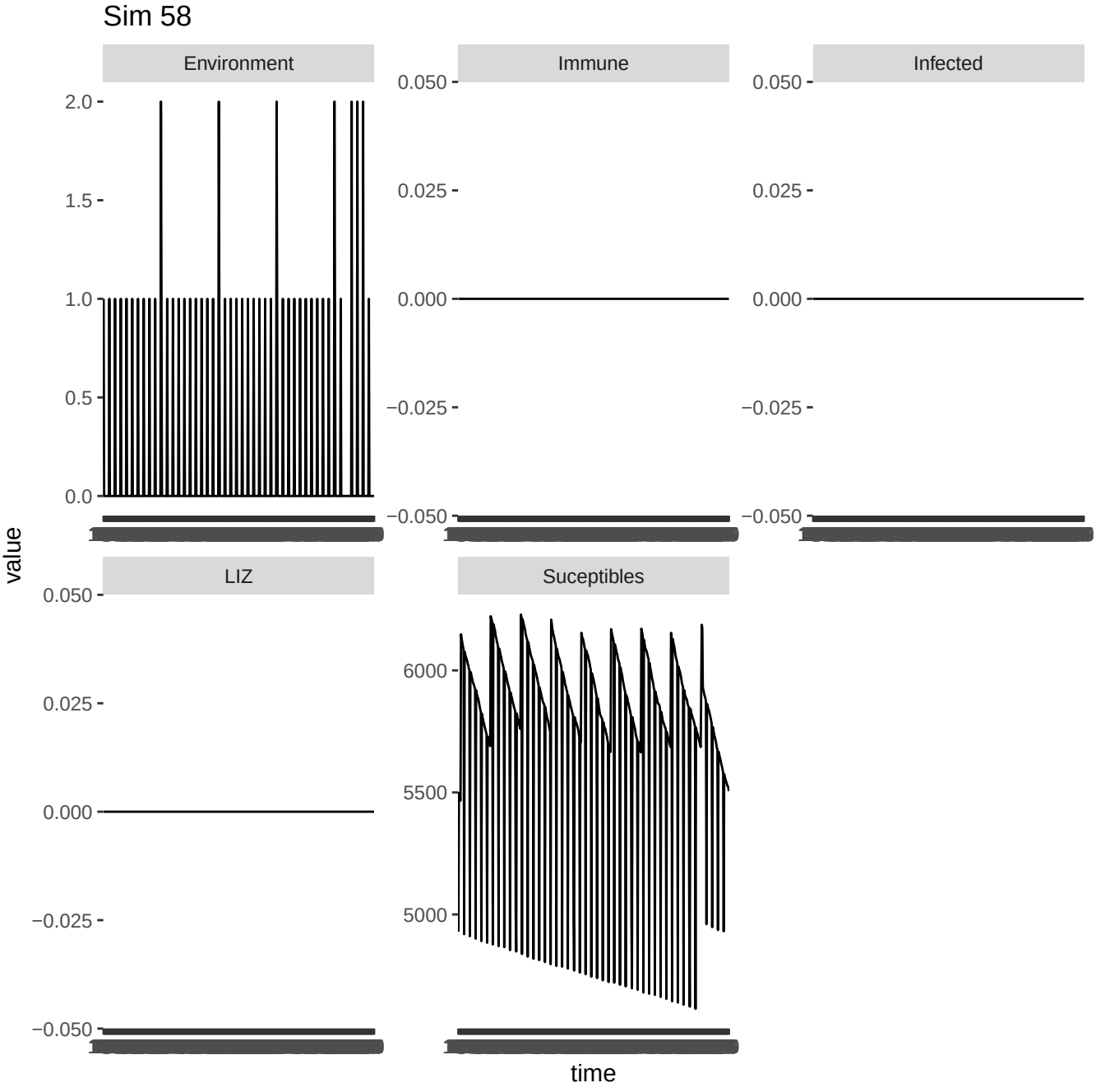

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

Sim 56

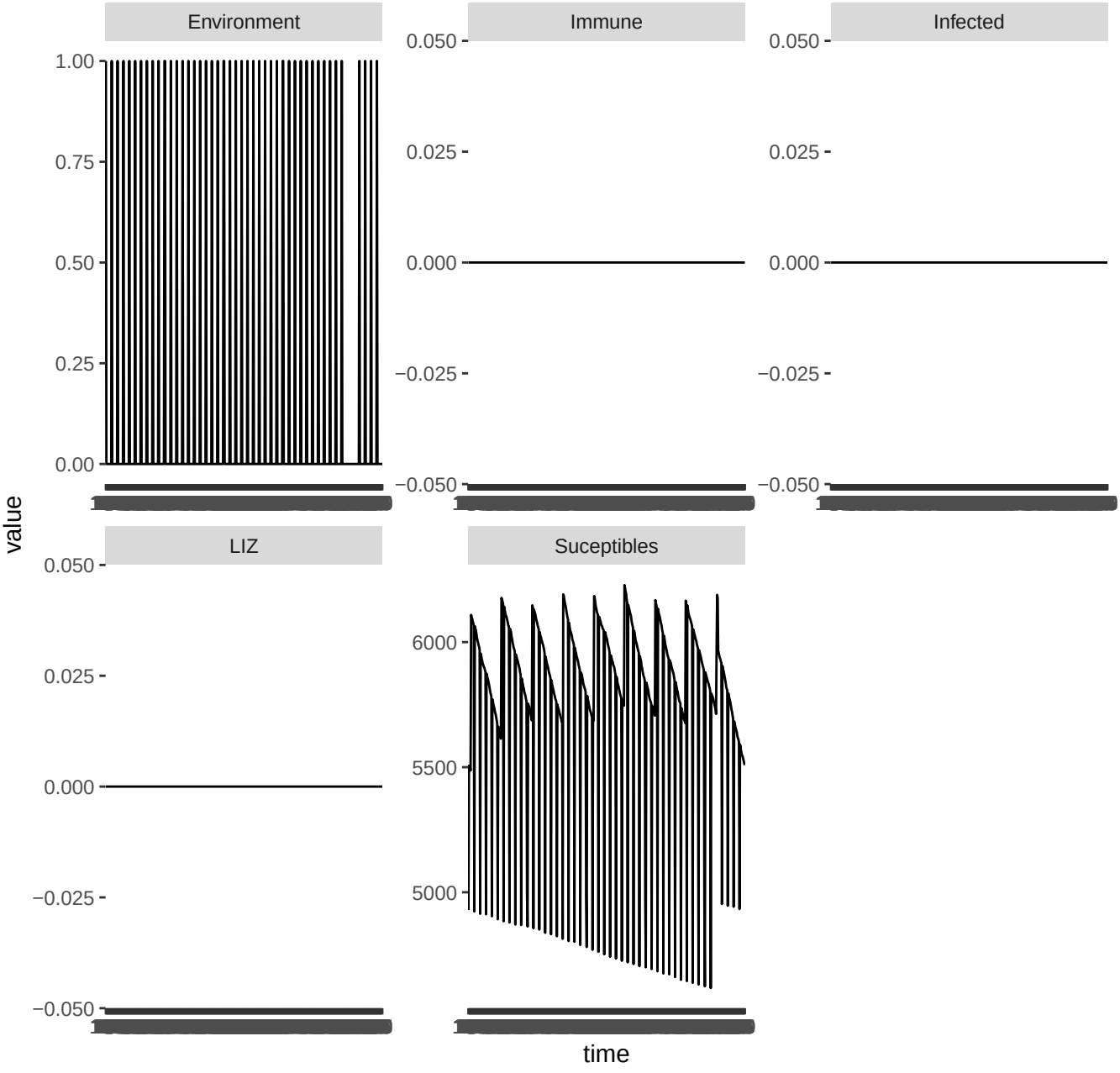

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

Sim 57

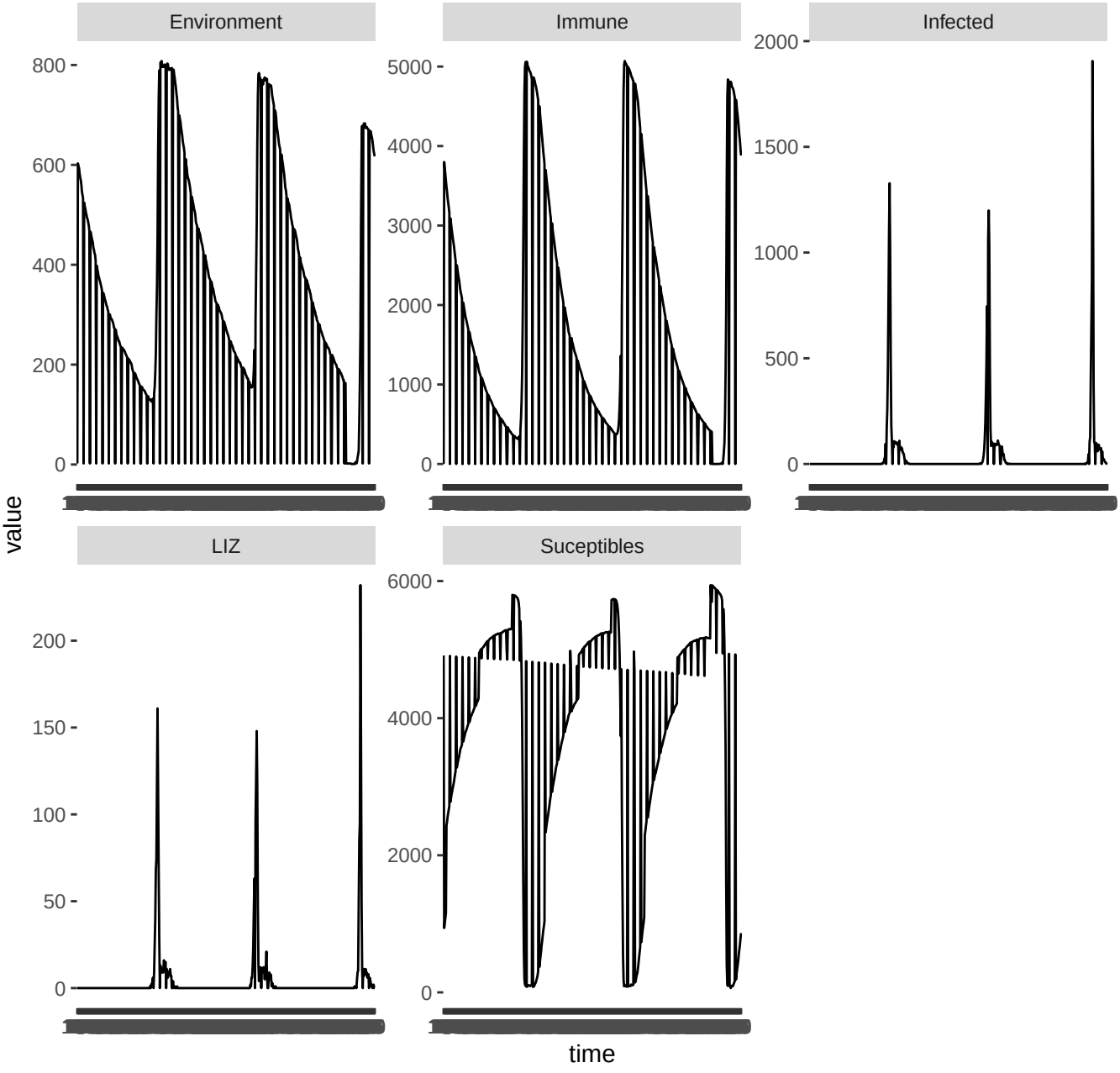

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000


Sim 58
Environment
Immune
Infected
LIZ
Suceptibles
value
time
2.0
1.5
1.0
0.5
0.0
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

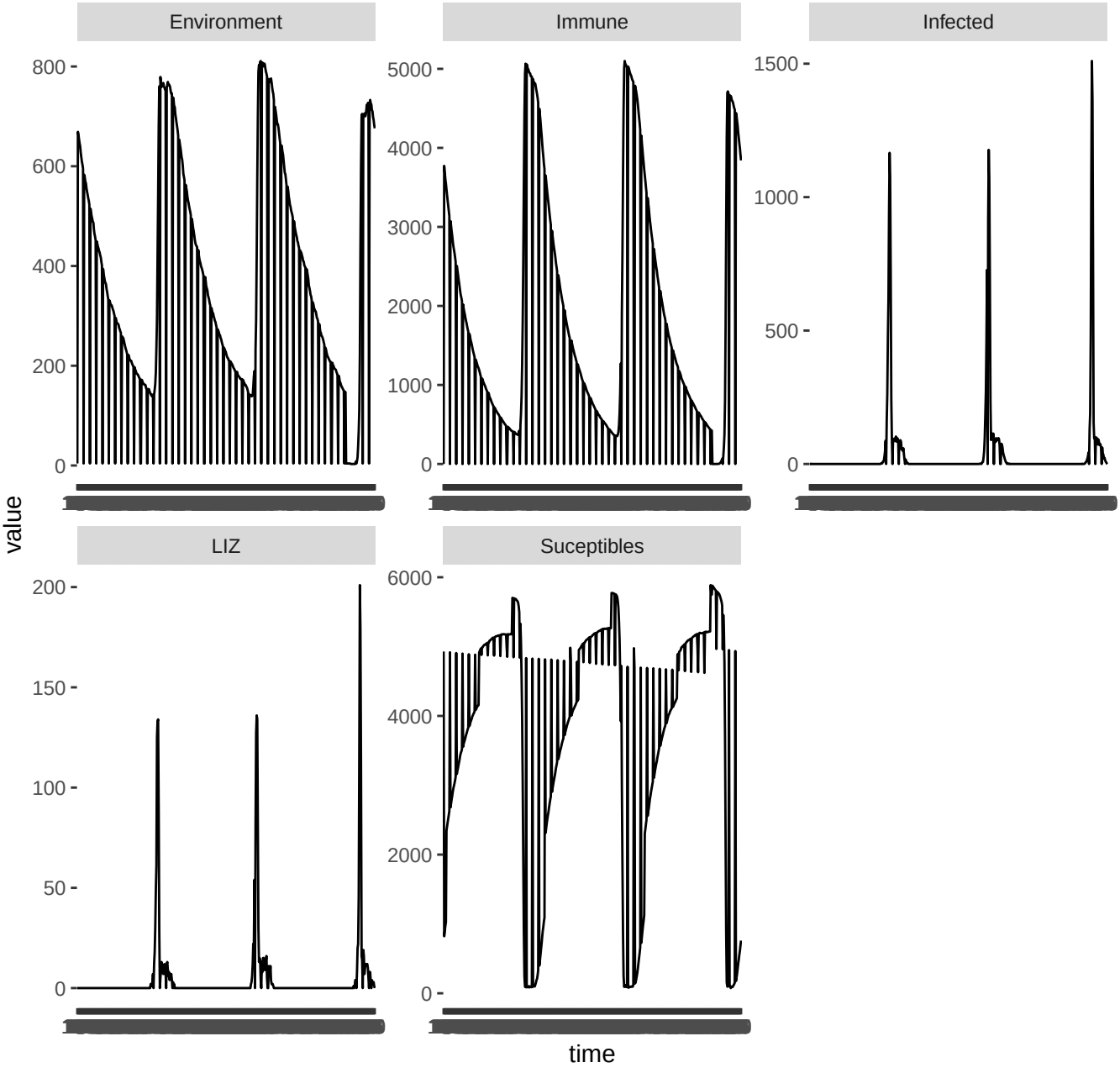
Sim 59


Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

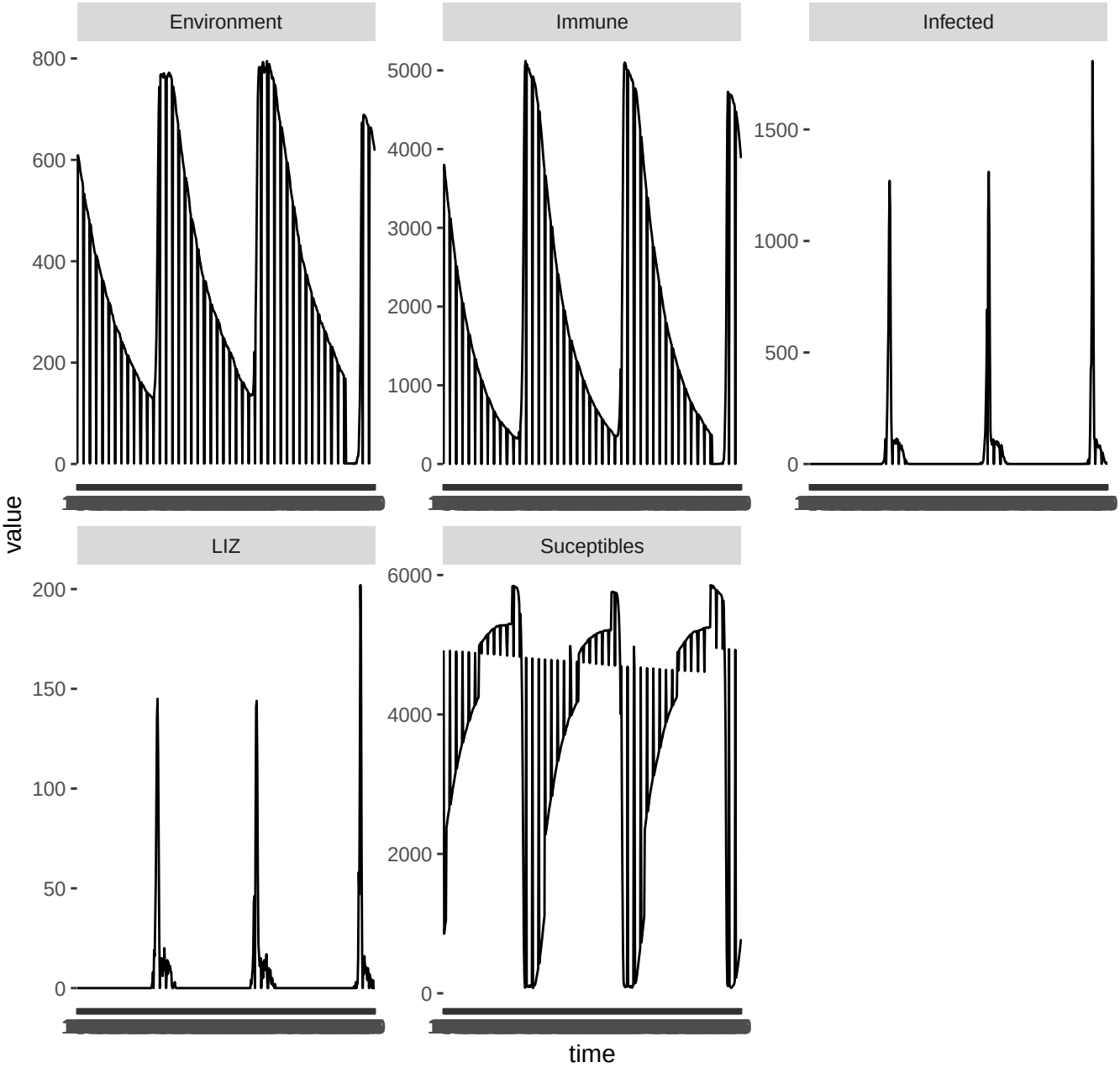
Sim 60


Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
2000
1500
1000
500
0
200
150
100
50
0
6000
4000
2000
0

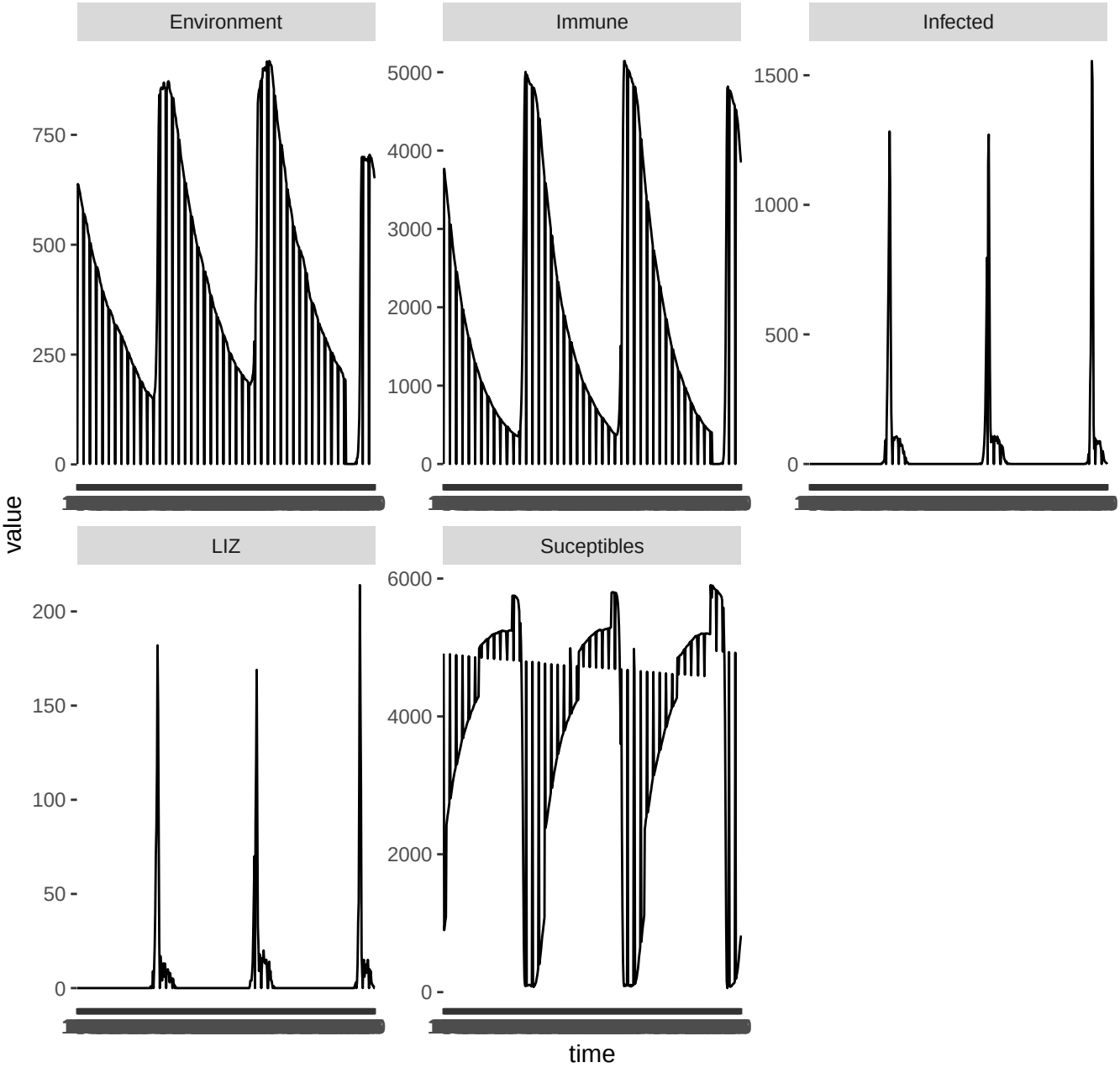
Sim 61


Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
200
150
100
50
0
6000
4000
2000
0

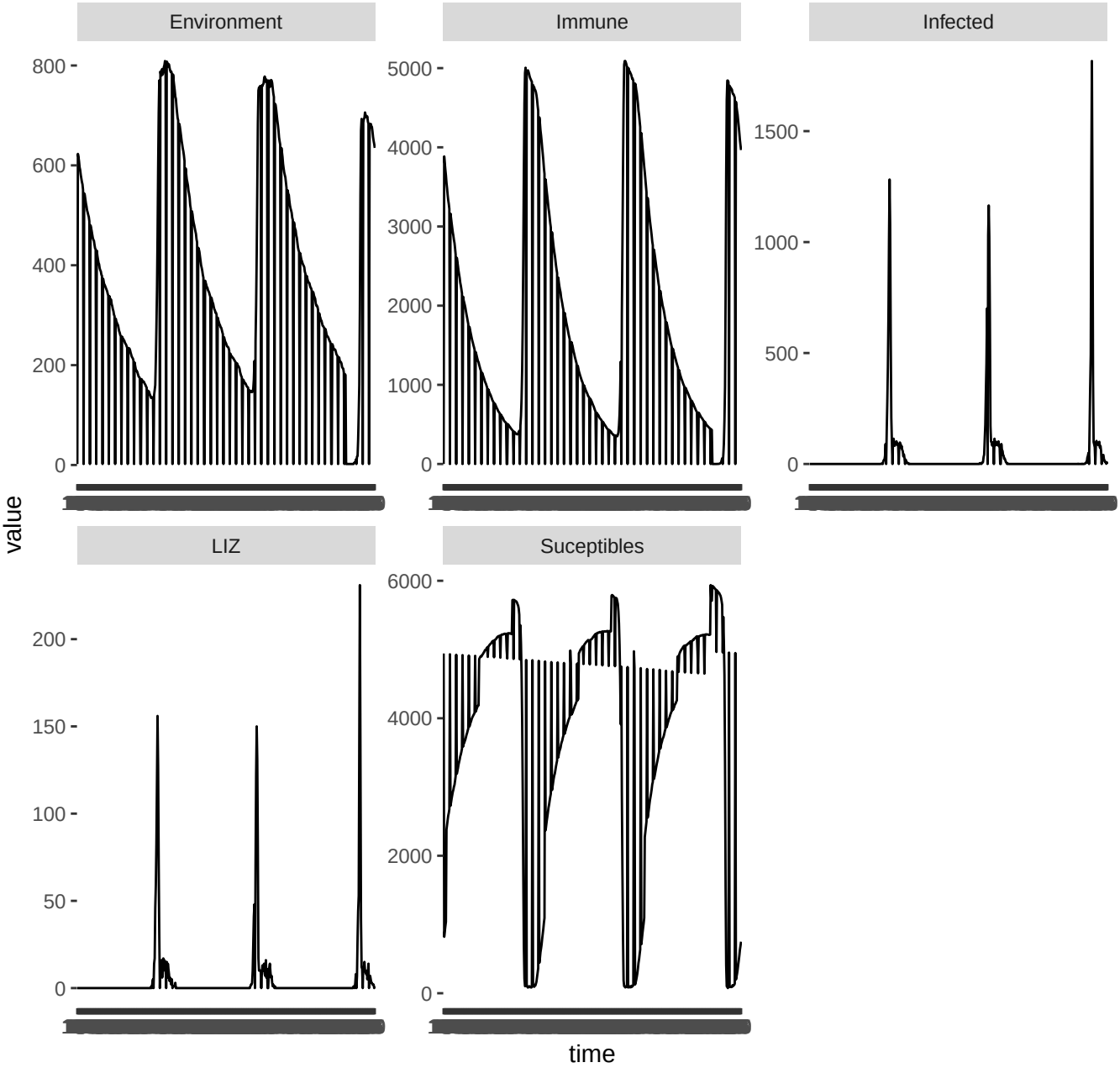
Sim 62

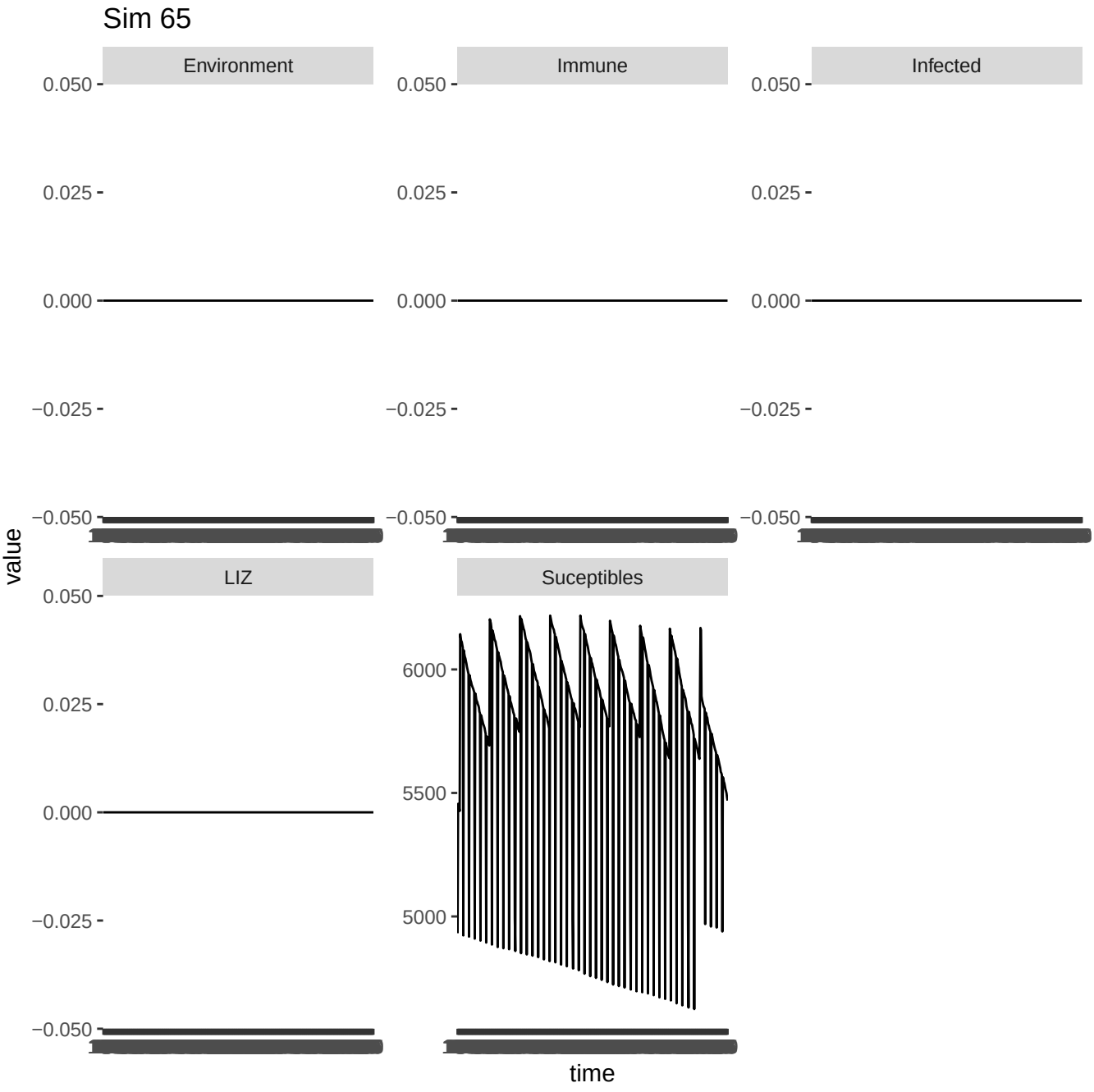

Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
200
150
100
50
0
6000
4000
2000
0

Sim 63

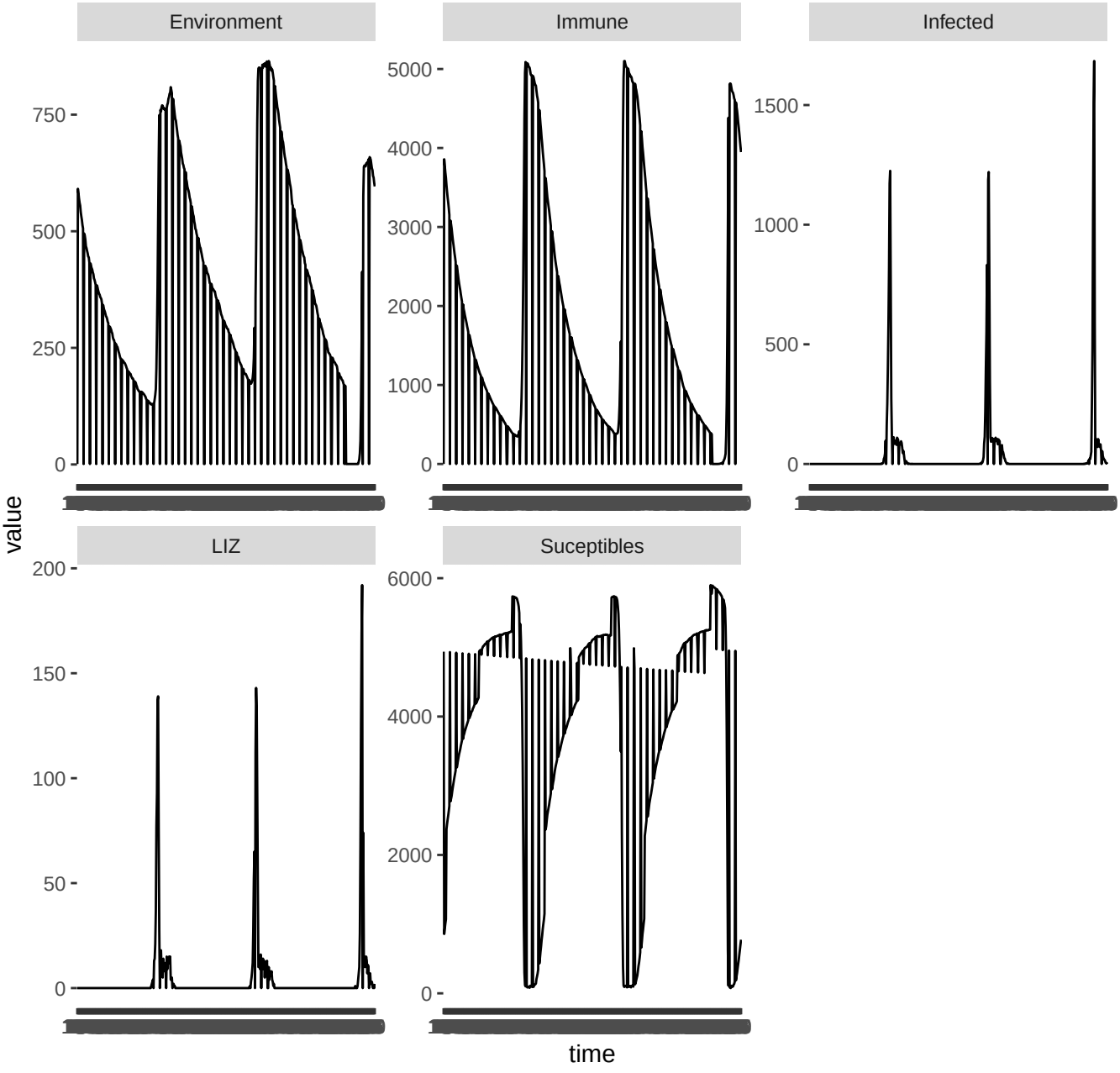

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150
200

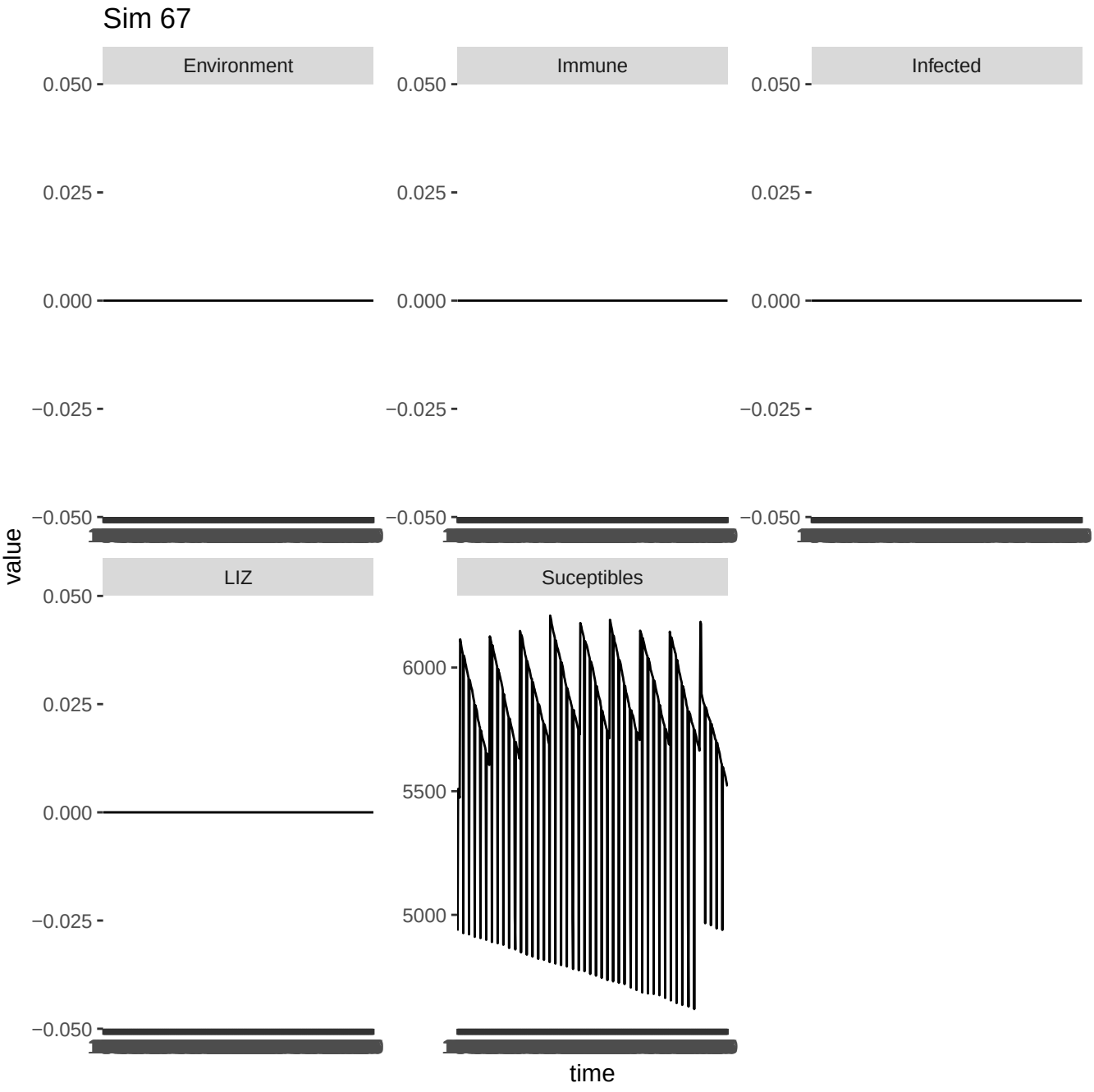
Sim 64


Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
200
150
100
50
0
6000
4000
2000
0

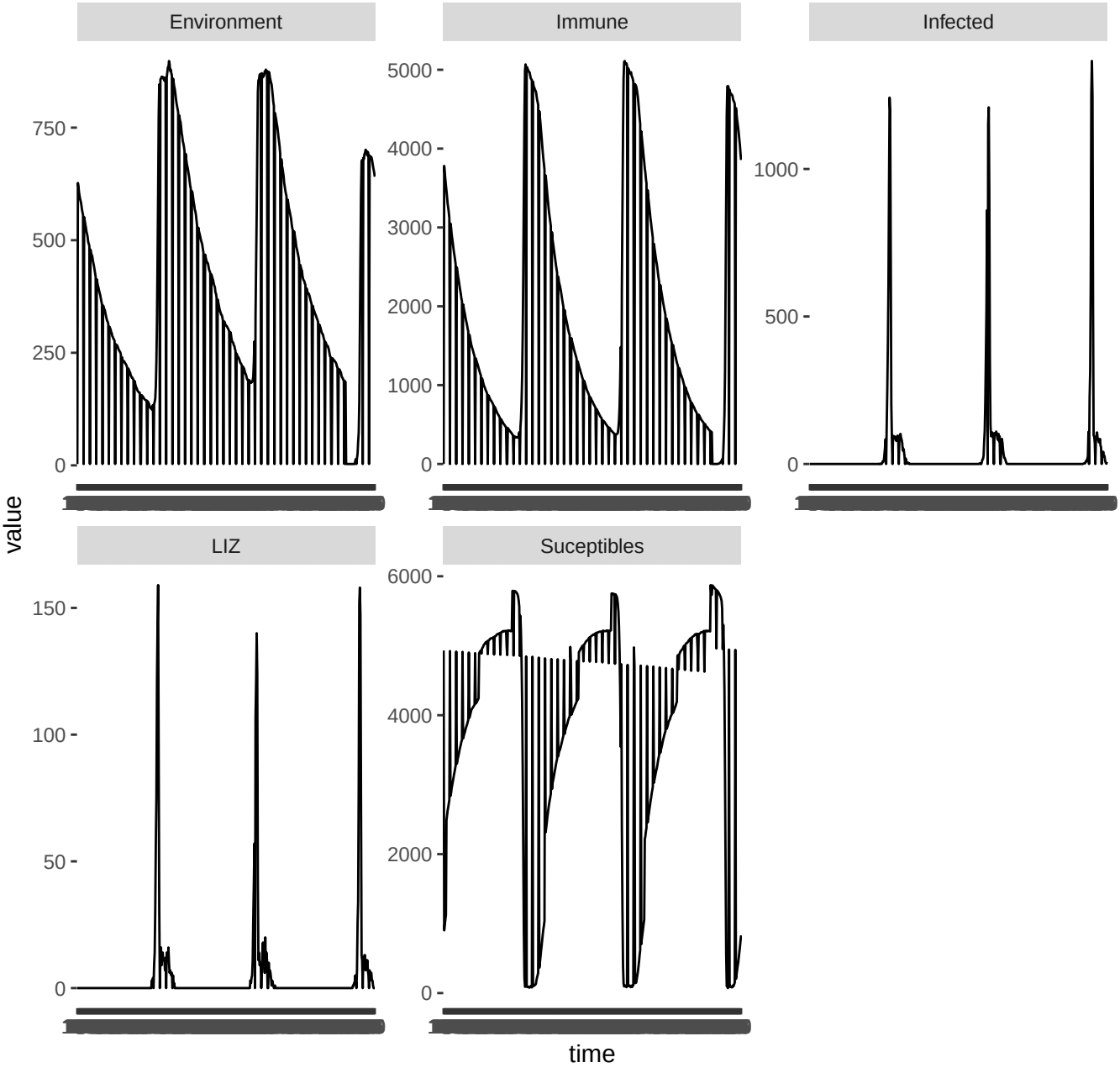

Sim 65
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

Sim 66

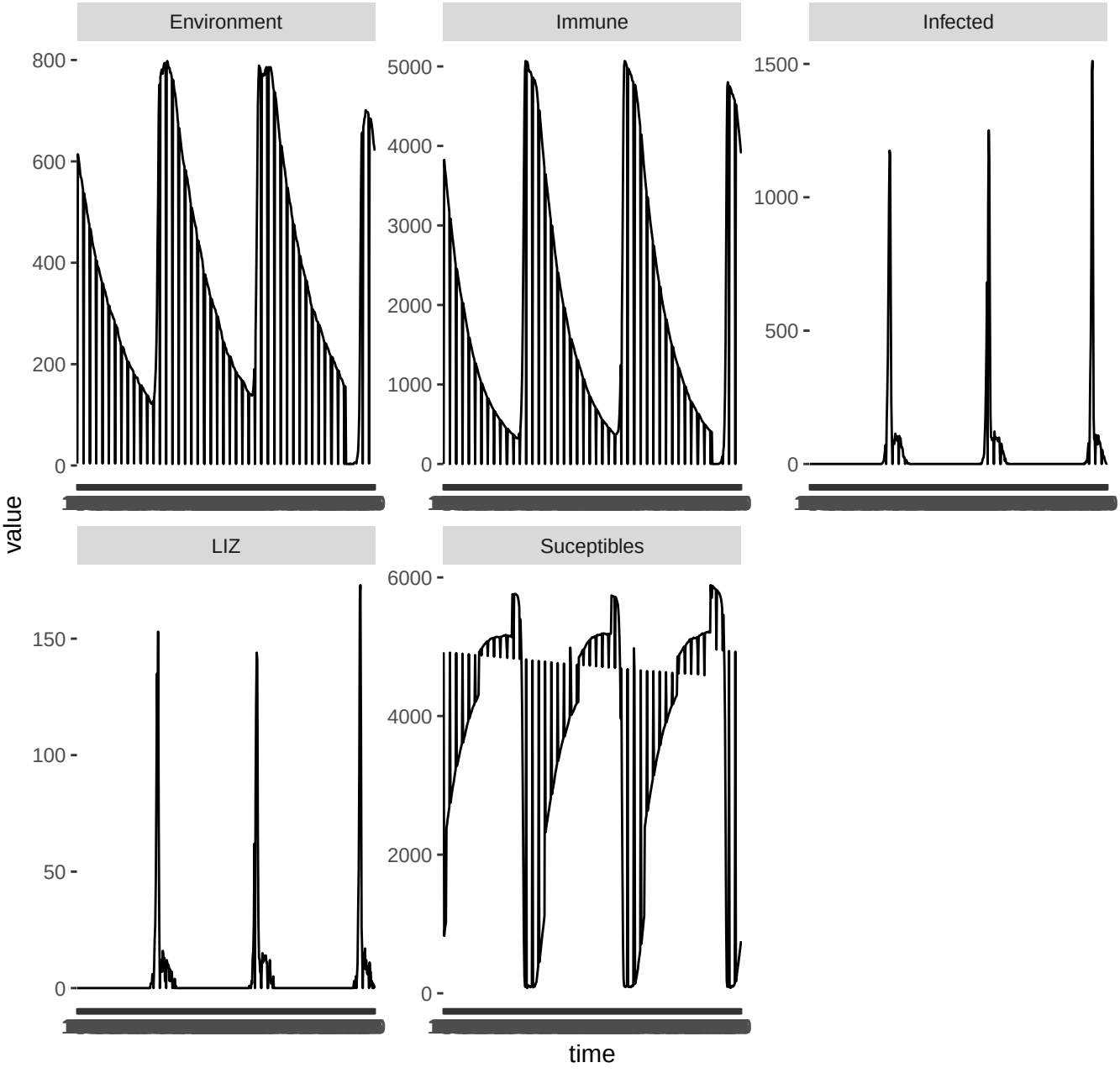

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150
200


Sim 67
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

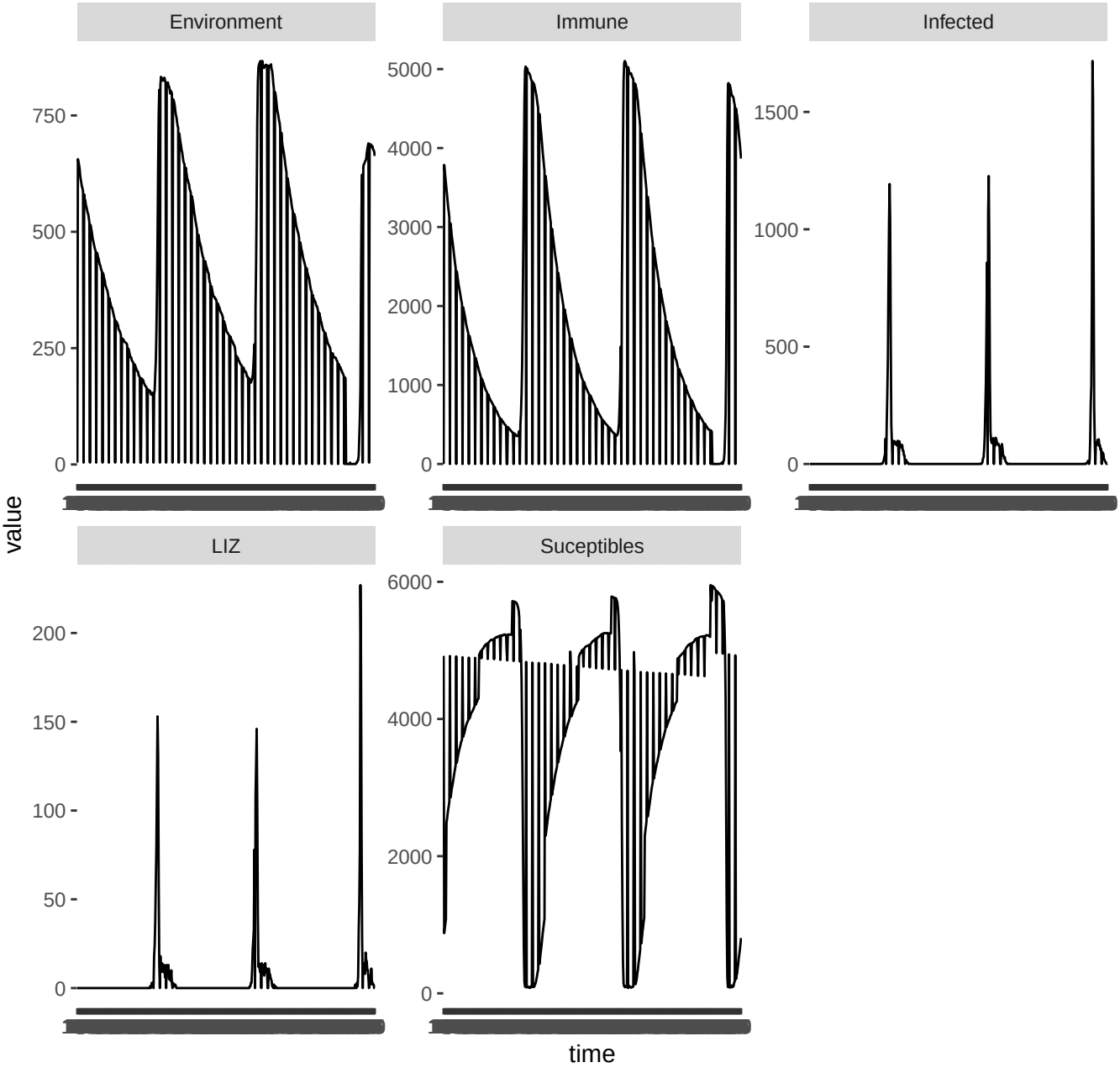
Sim 68


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
2000
3000
4000
5000
6000
50
100
150

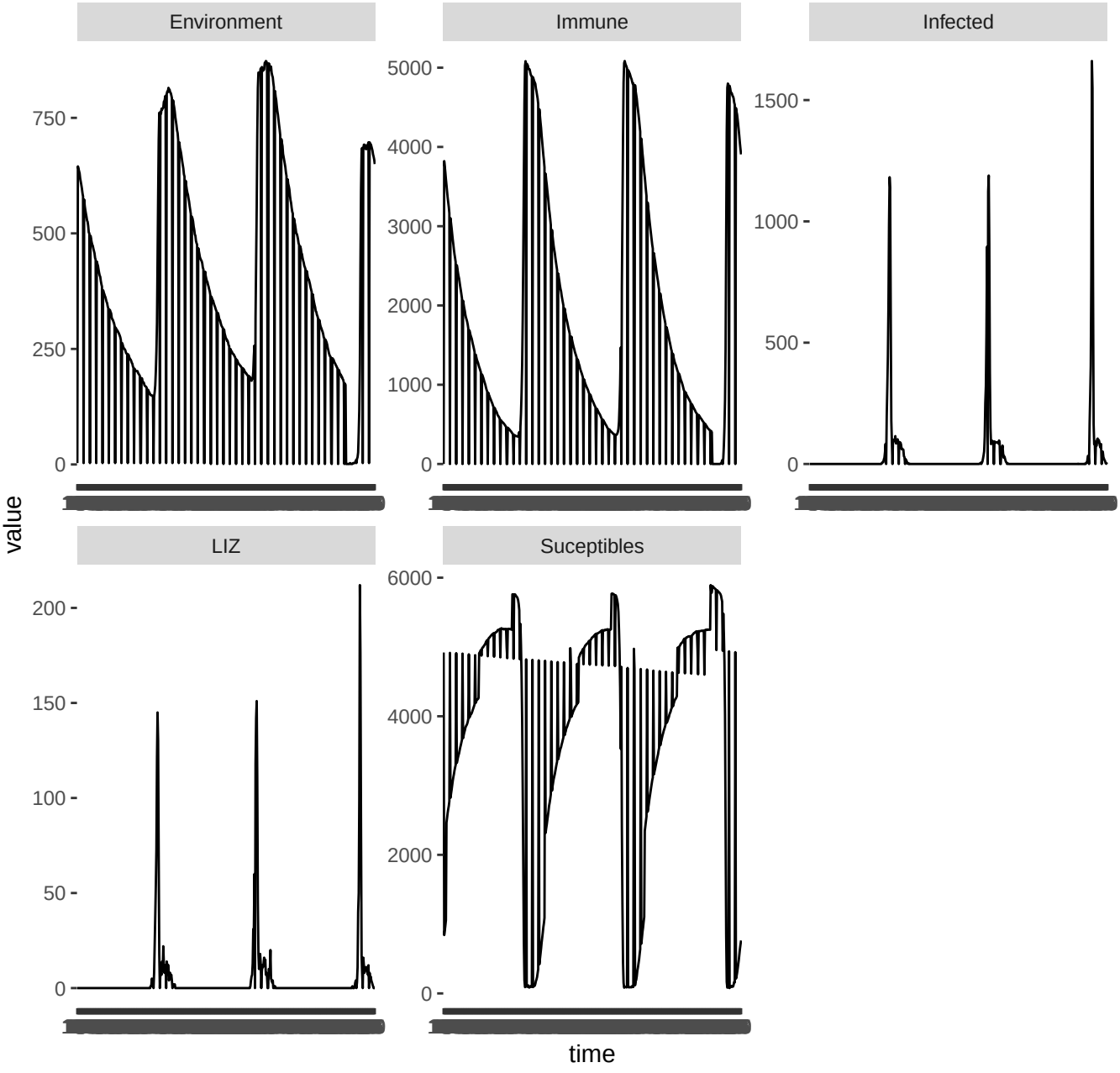
Sim 69


Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
150
100
50
0
6000
4000
2000
0

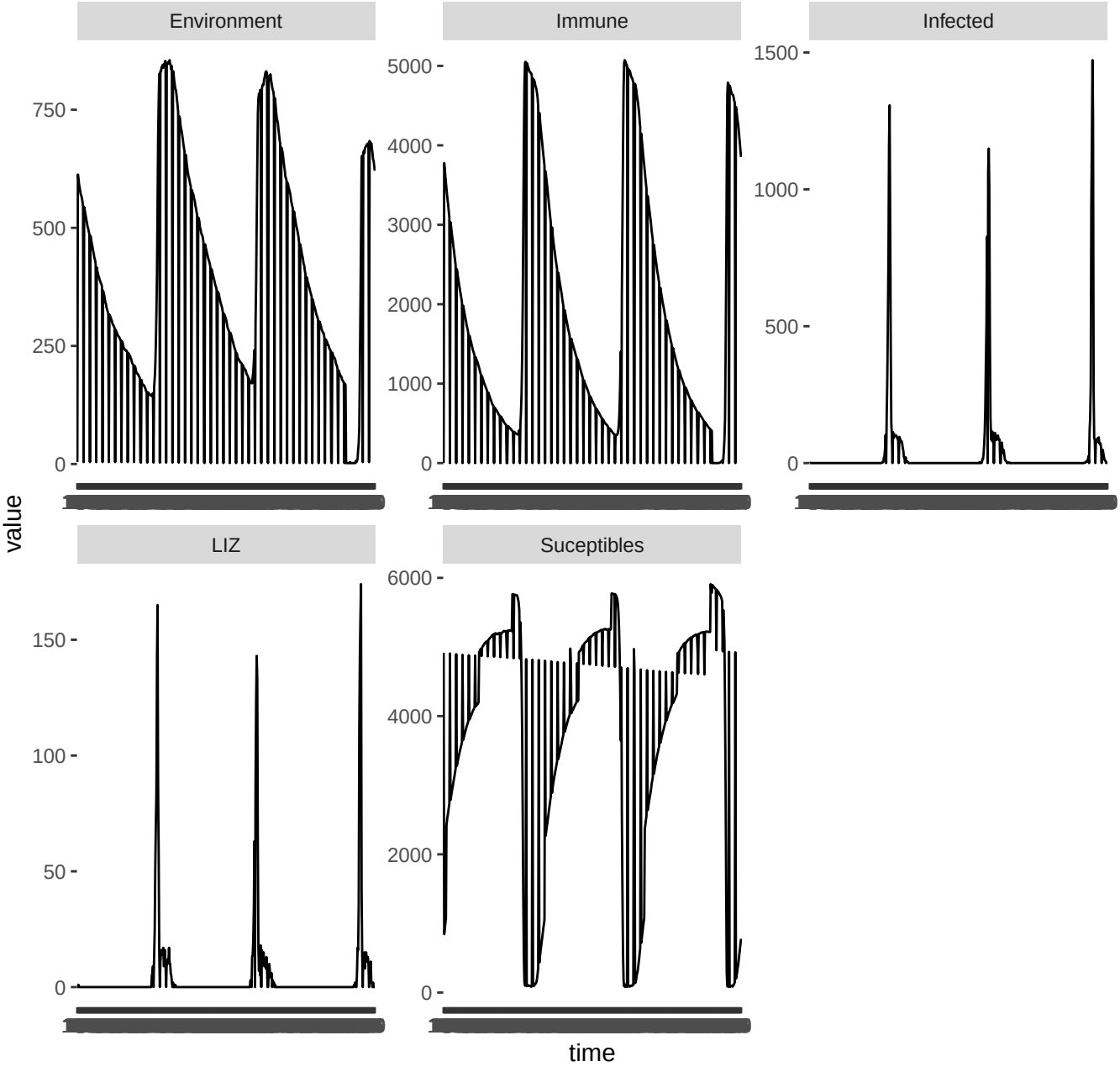
Sim 70


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
2000
3000
4000
5000
1500
50
100
150
200
6000

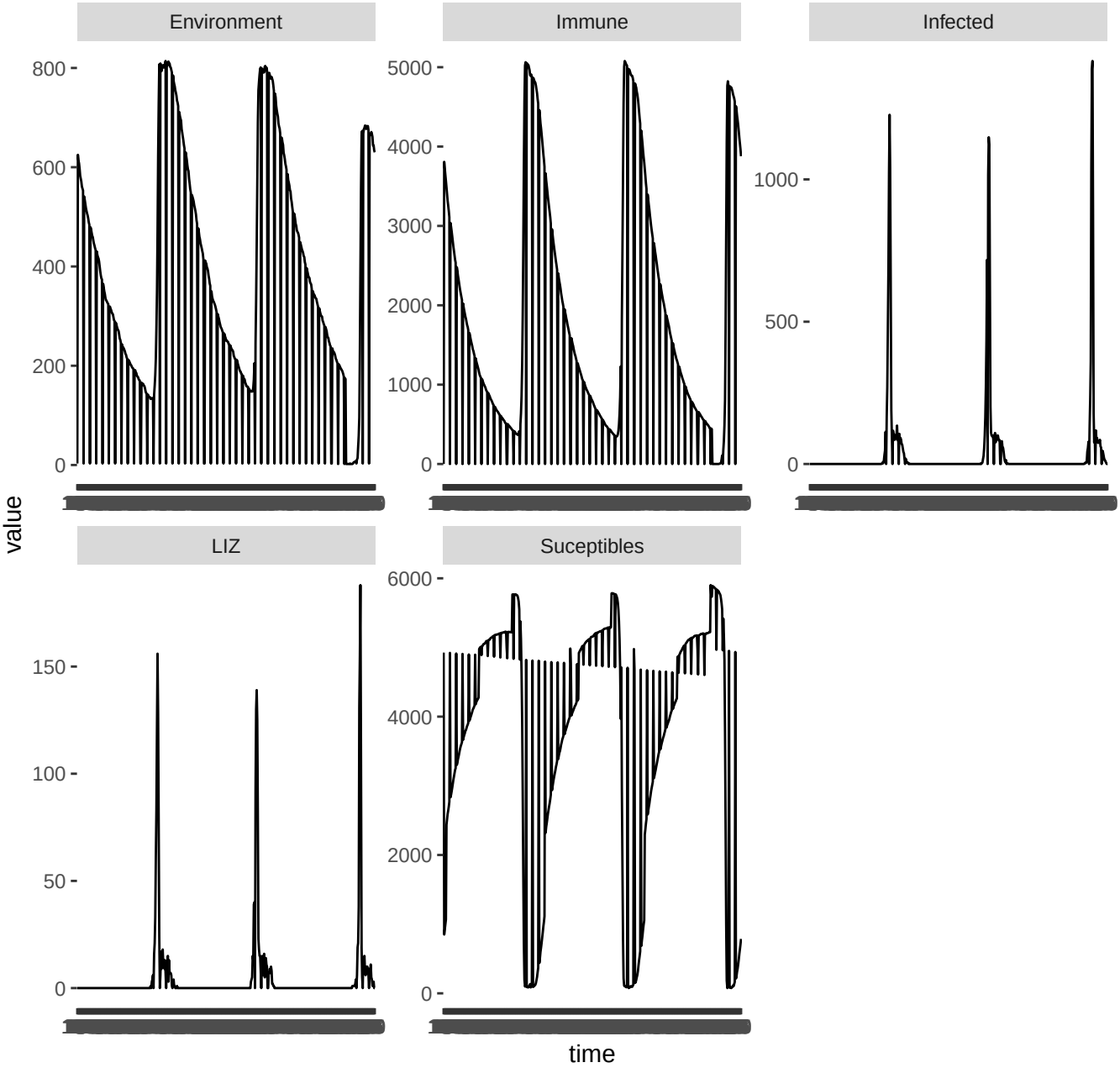
Sim 71


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150
200

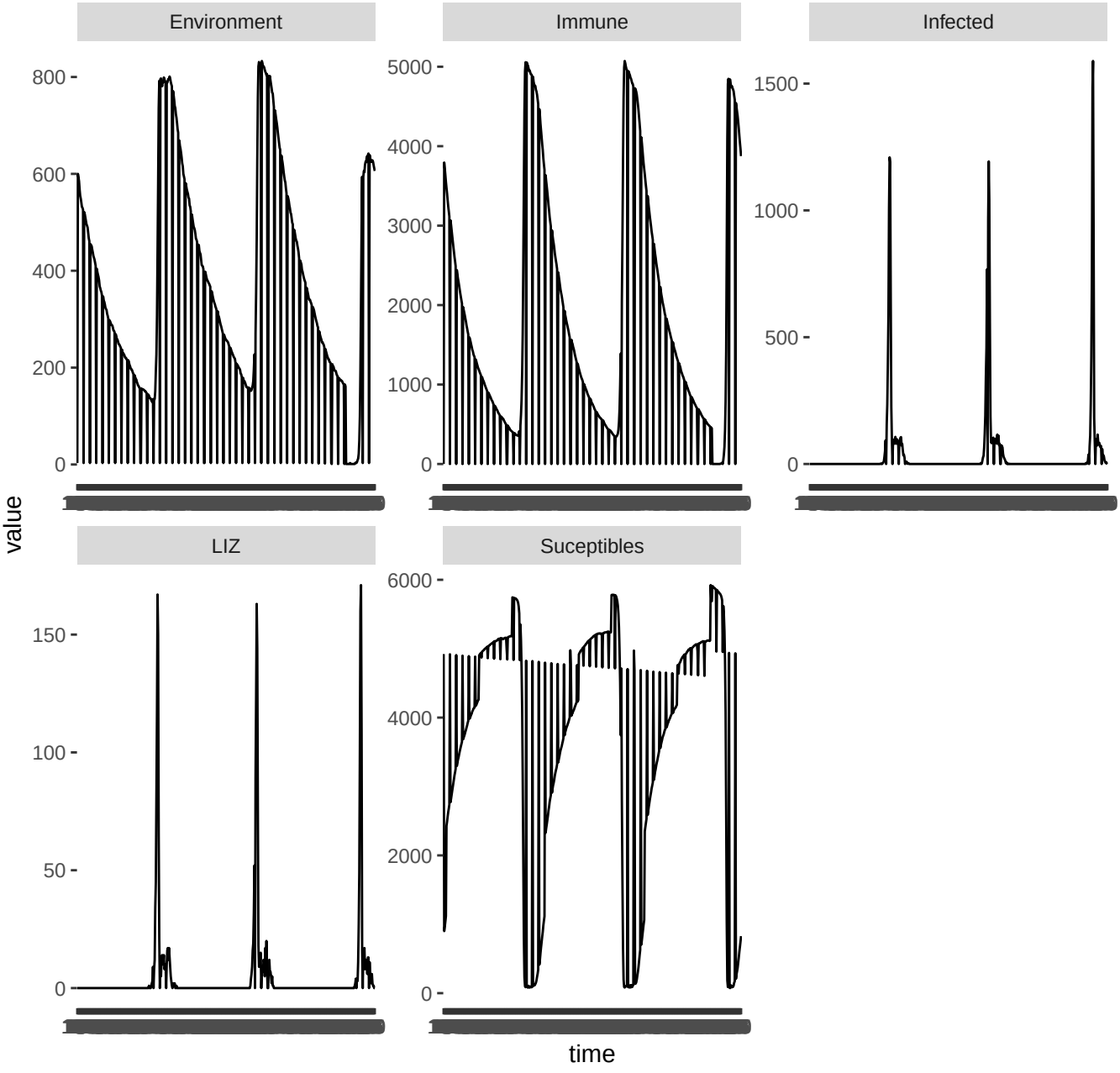
Sim 72

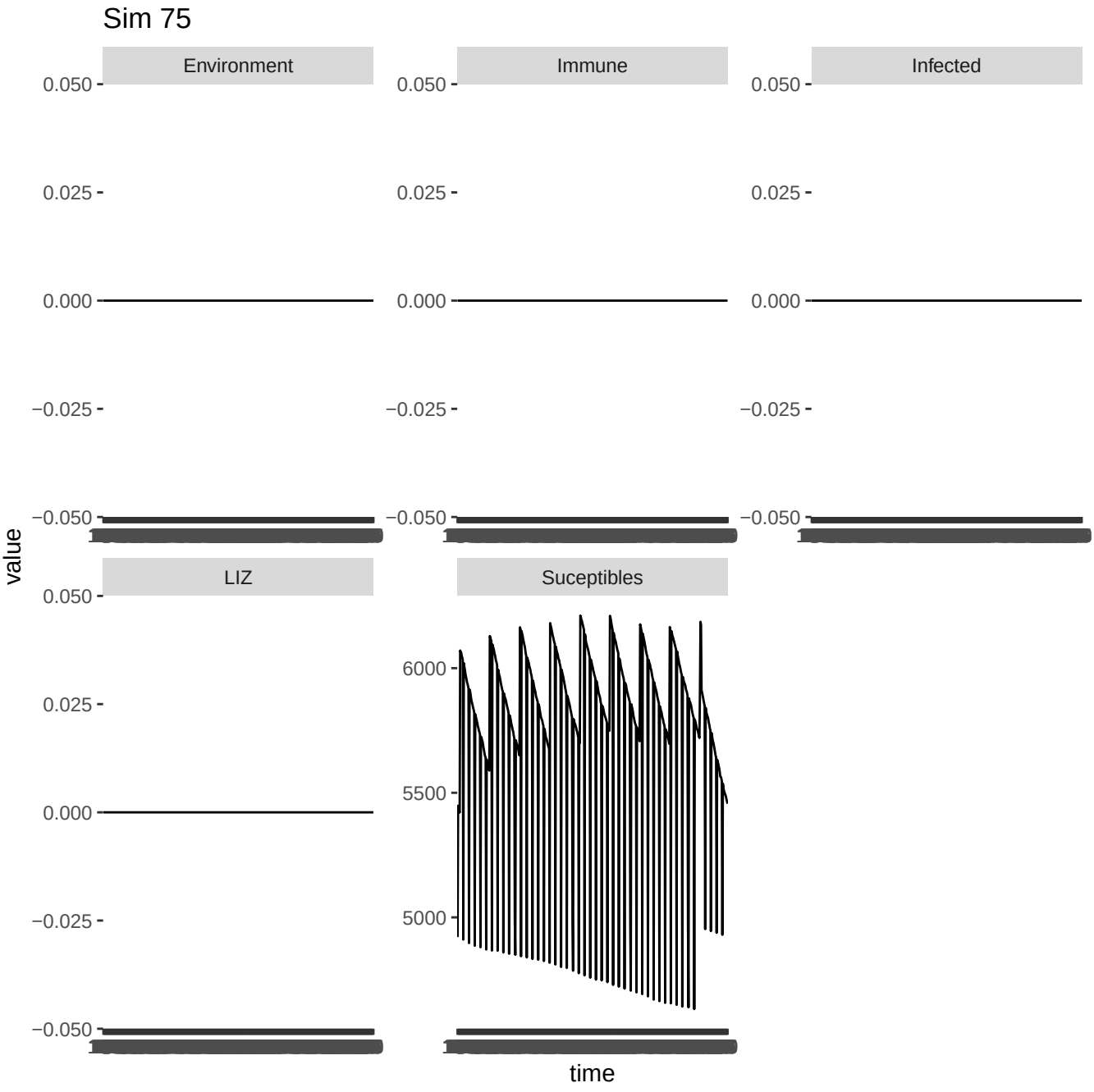

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150

Sim 73

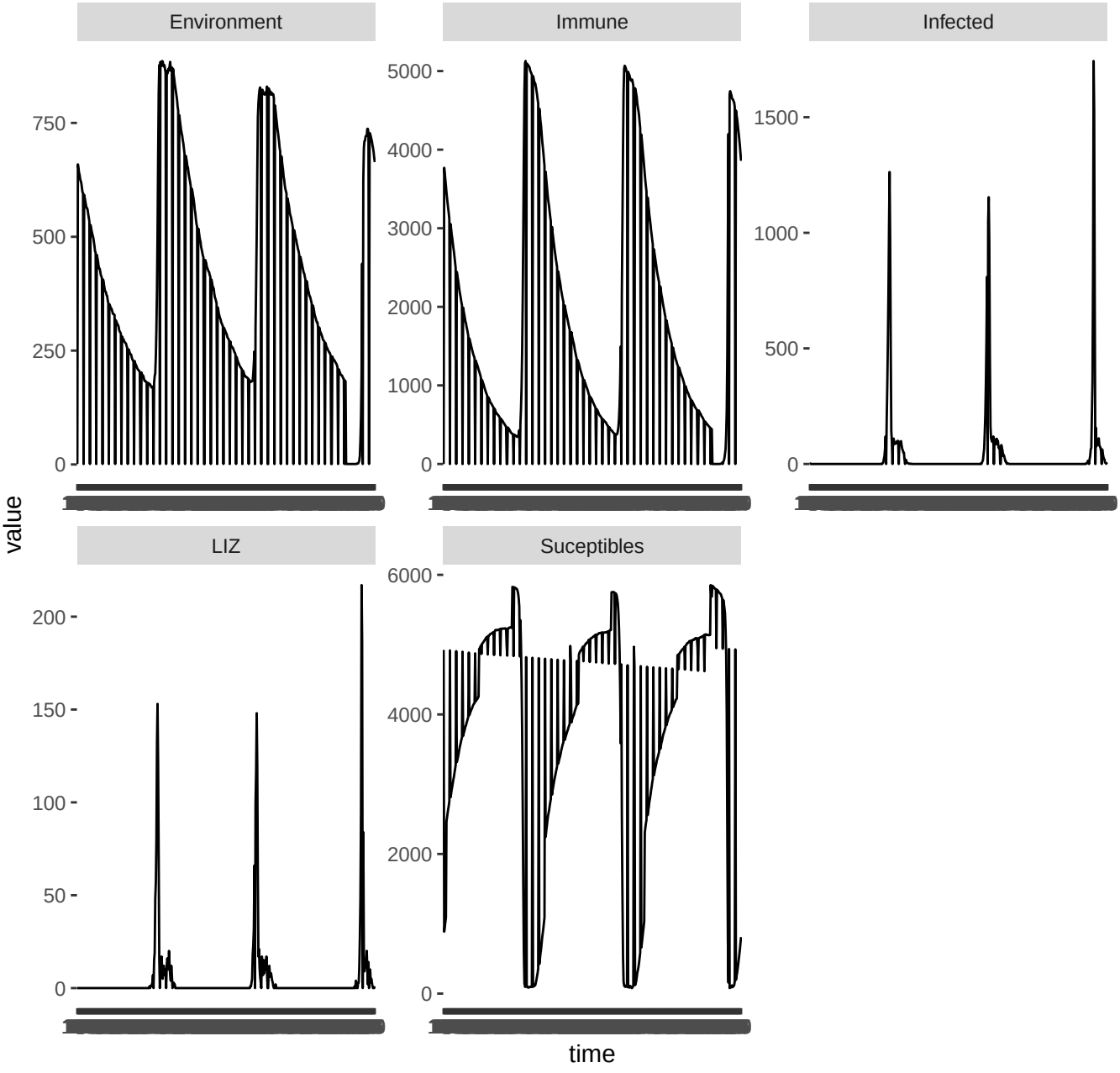

Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1000
500
0
150
100
50
0
6000
4000
2000
0

Sim 74

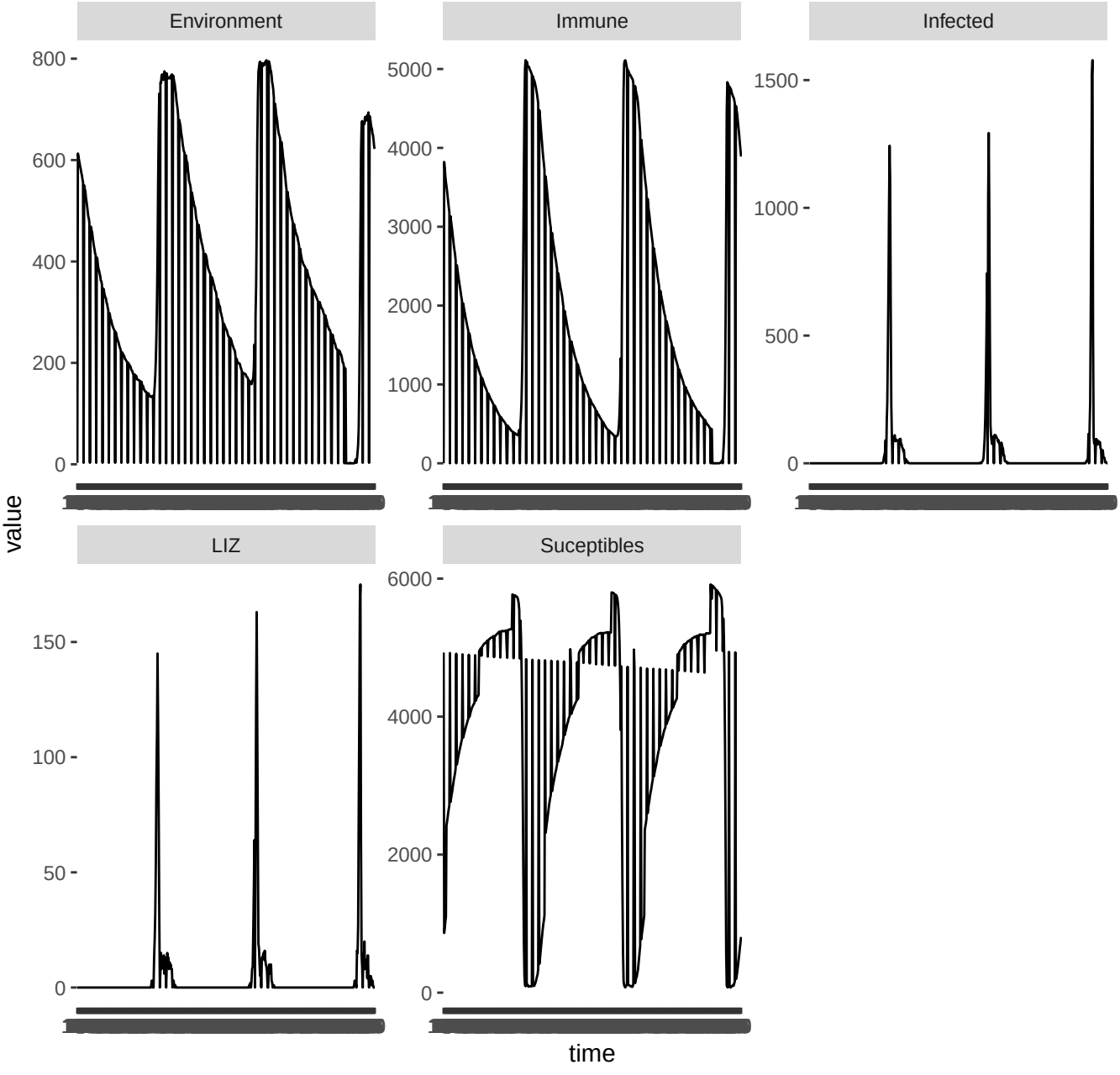

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000


Sim 75
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

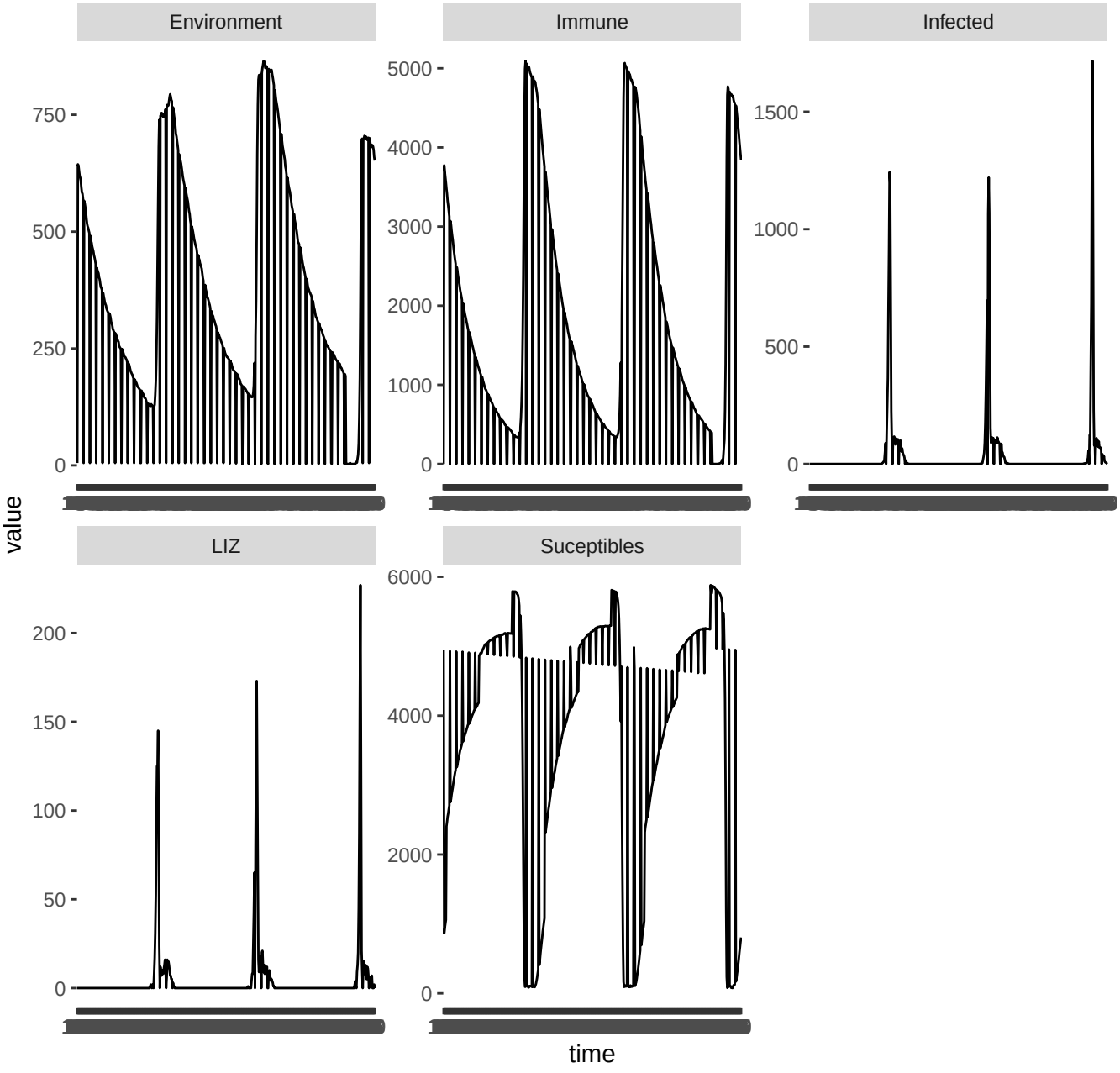
Sim 76

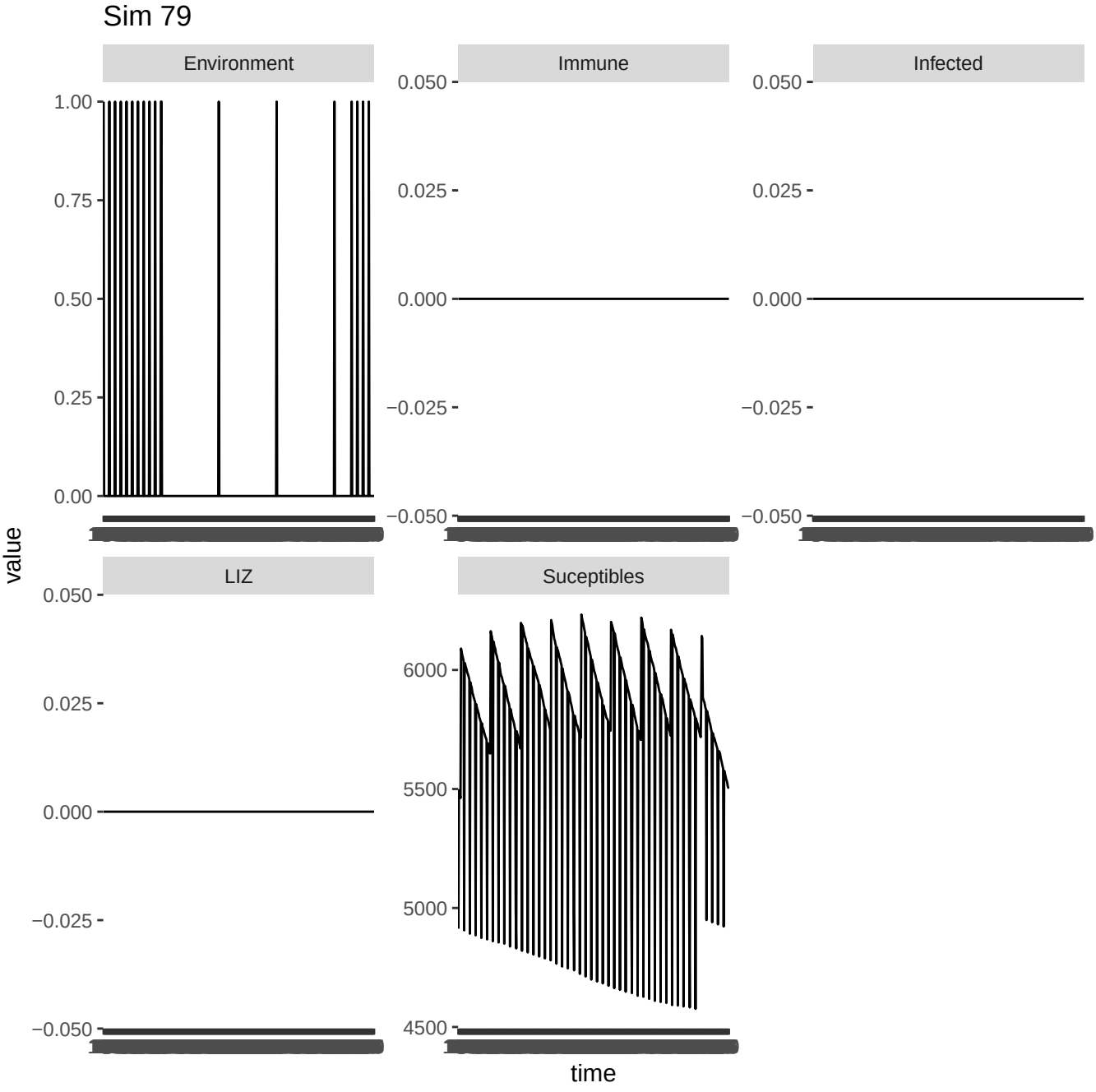

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
2000
3000
4000
5000
1500
50
100
150
200
6000

Sim 77

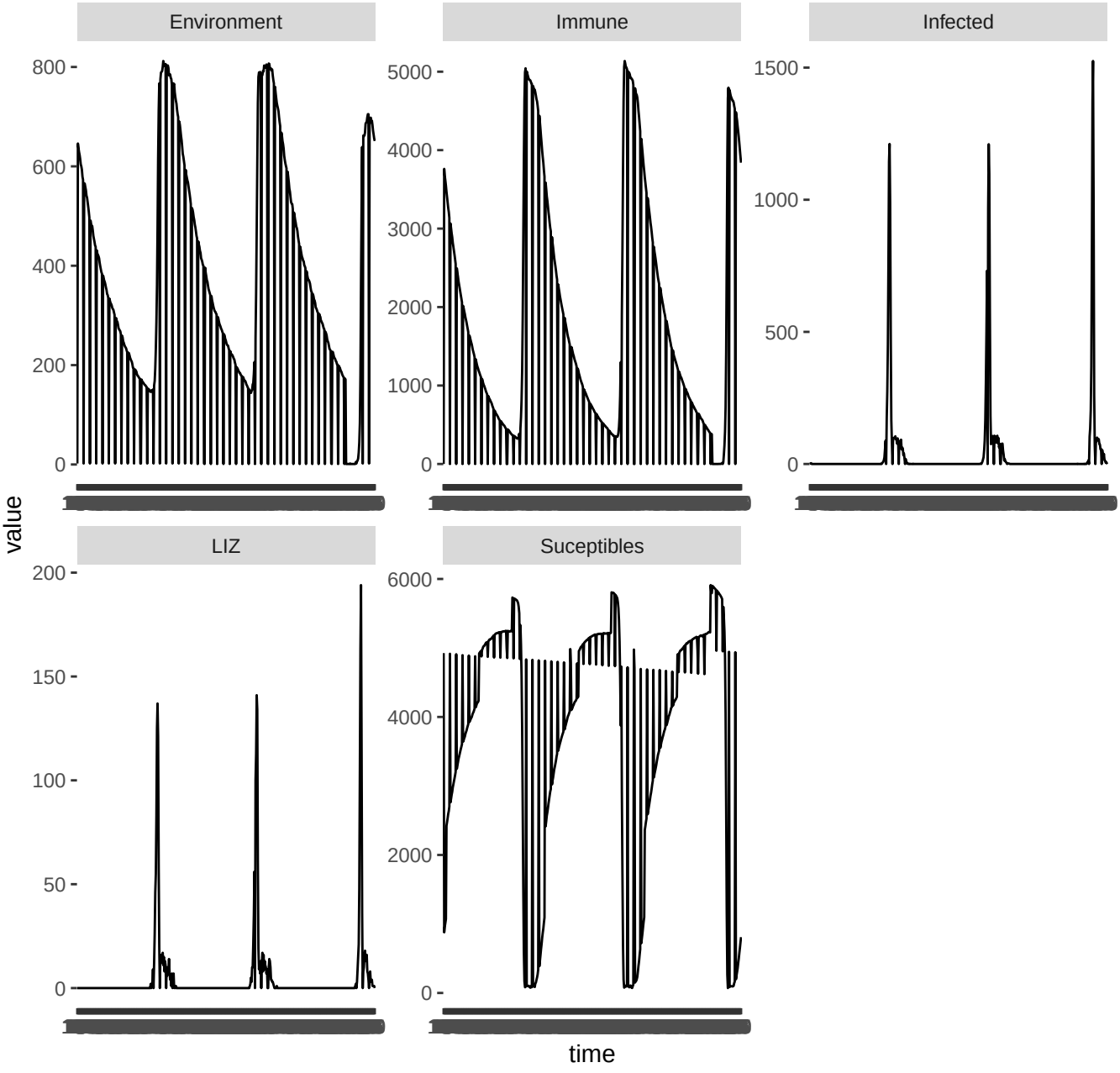

Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
150
100
50
0
6000
4000
2000
0

Sim 78

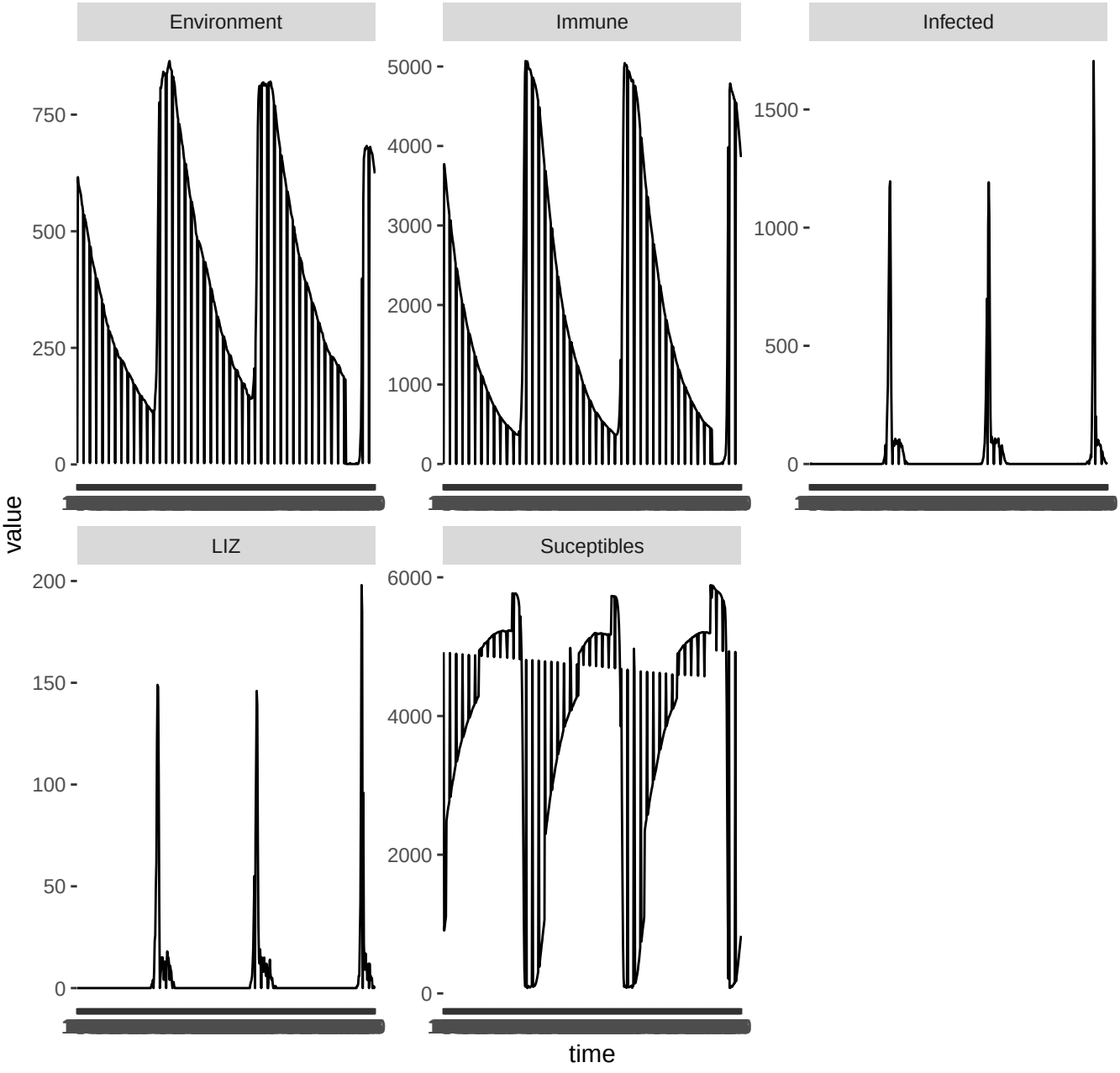

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
2000
3000
4000
5000
1500
50
100
150
200
6000


Sim 79
Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
4500

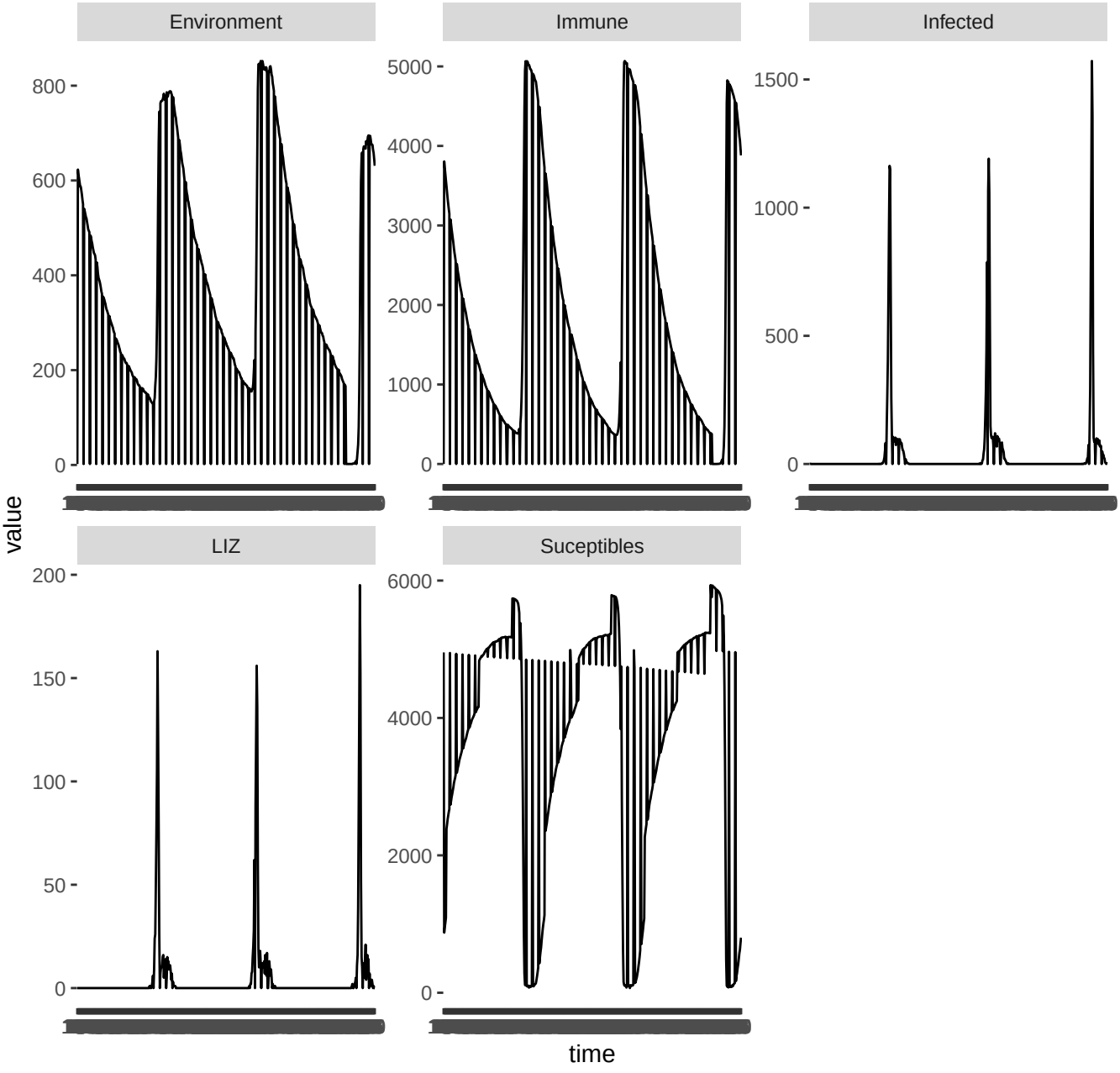
Sim 80


Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
200
150
100
50
0
6000
4000
2000
0

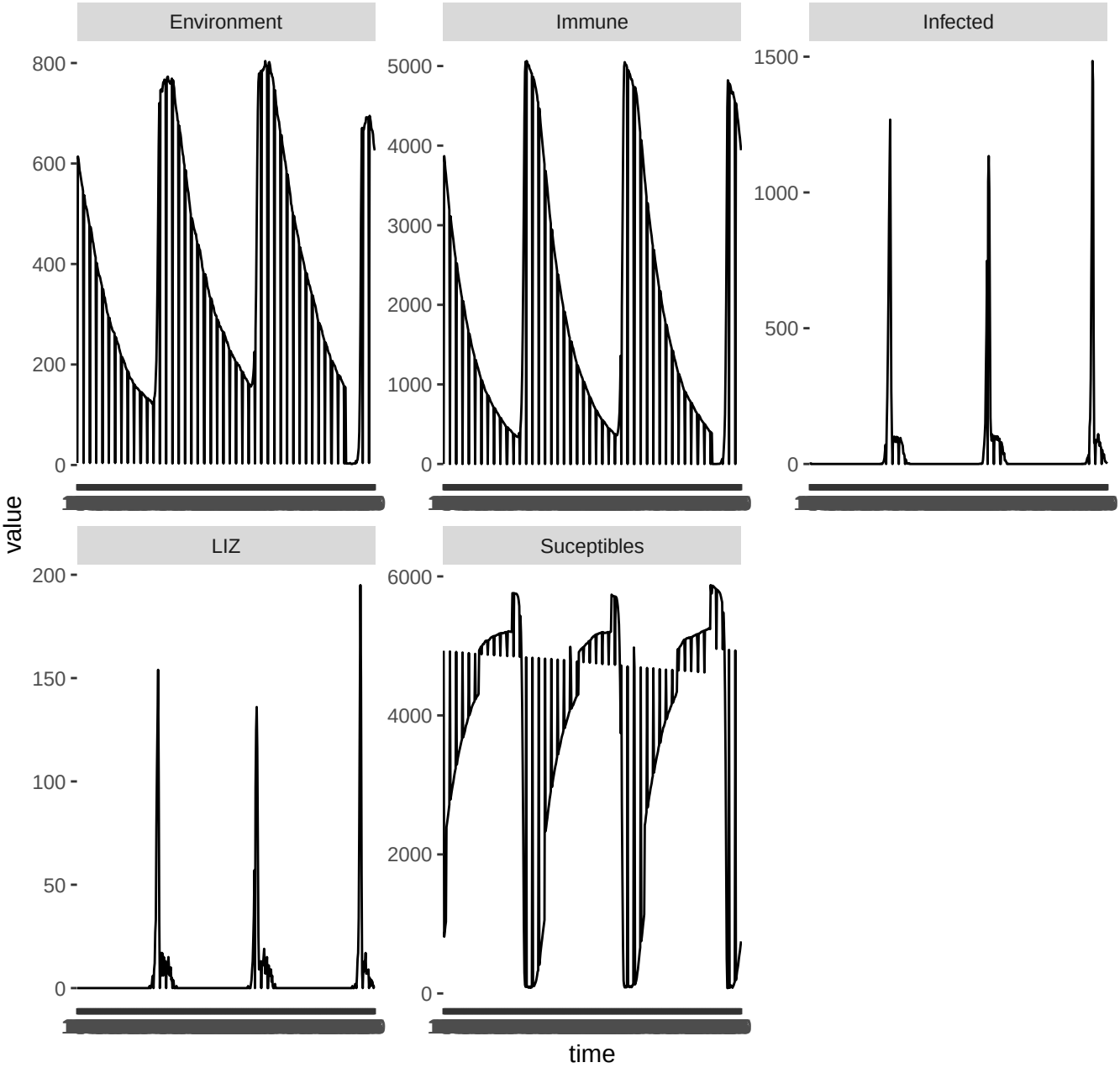
Sim 81


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150
200

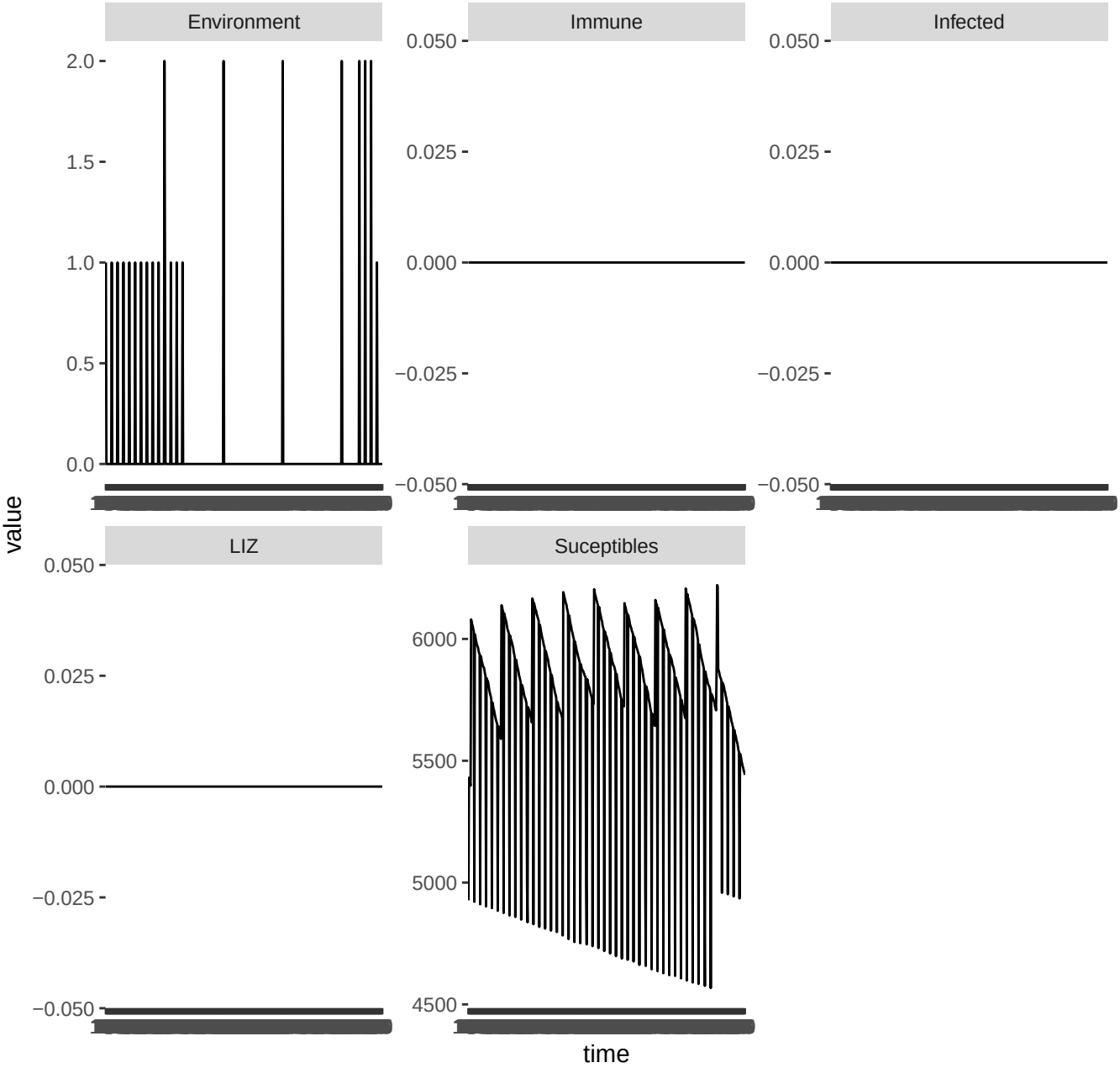
Sim 82


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

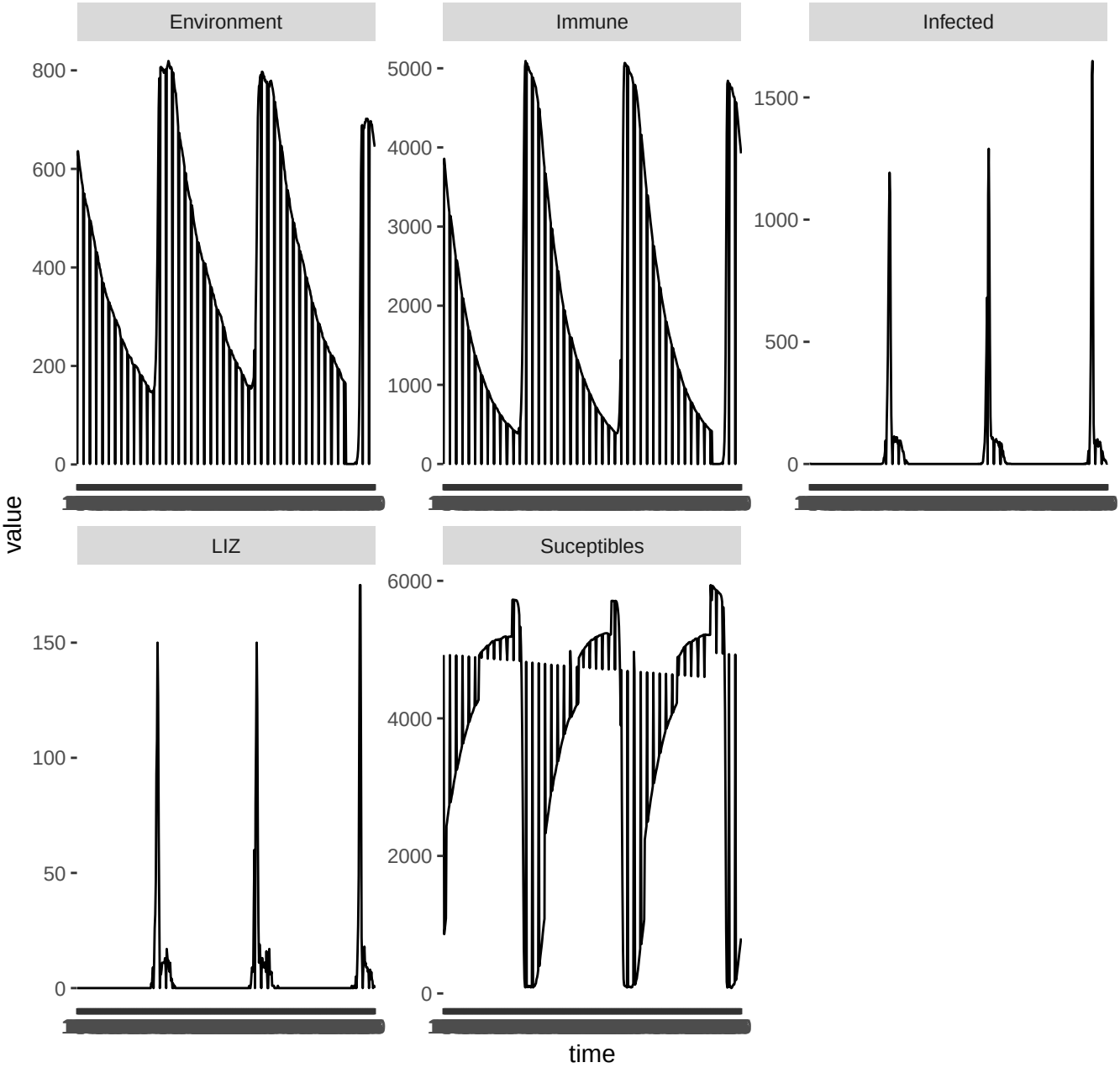
Sim 83


Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
200
150
100
50
0
6000
4000
2000
0

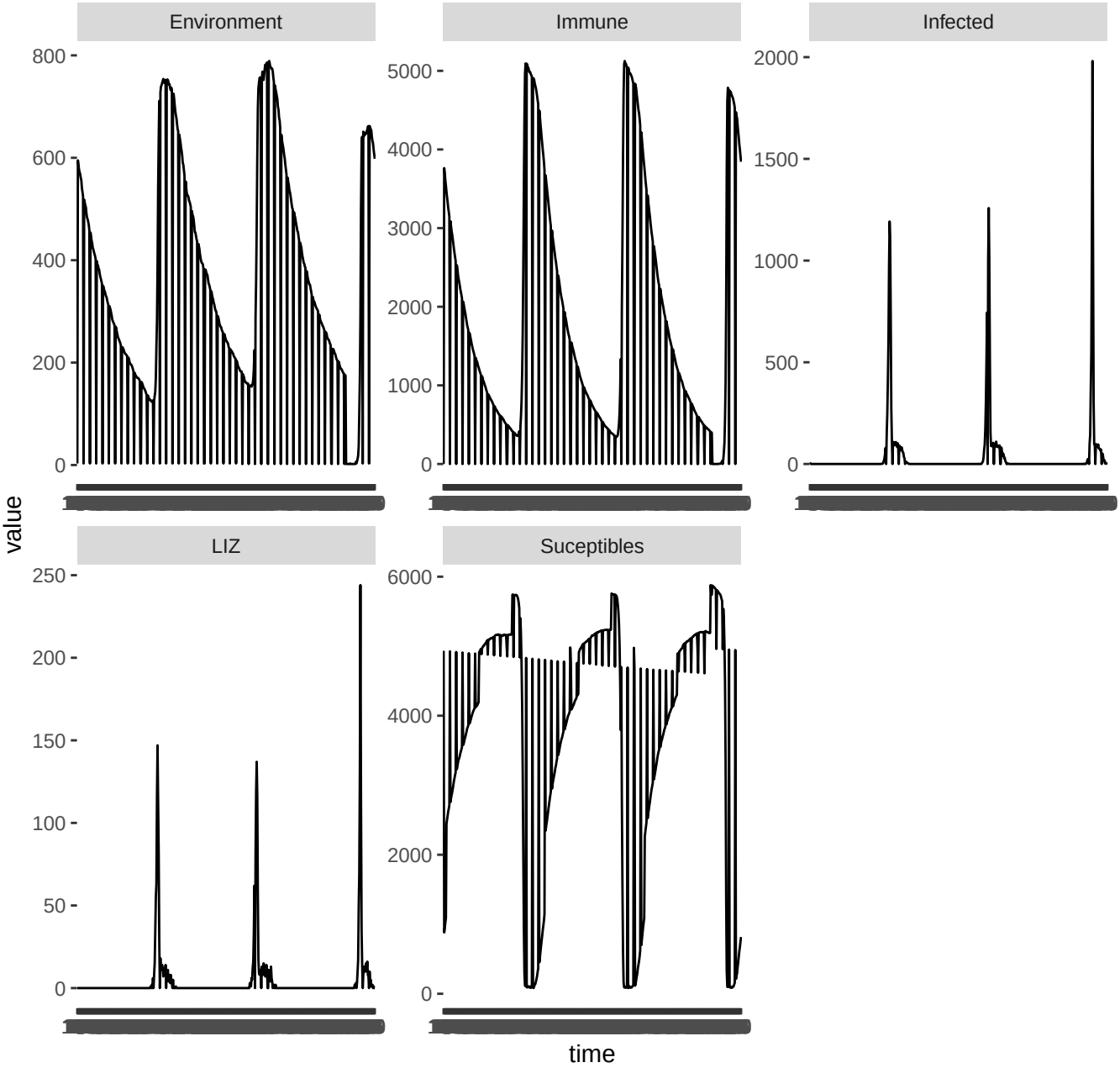
Sim 84

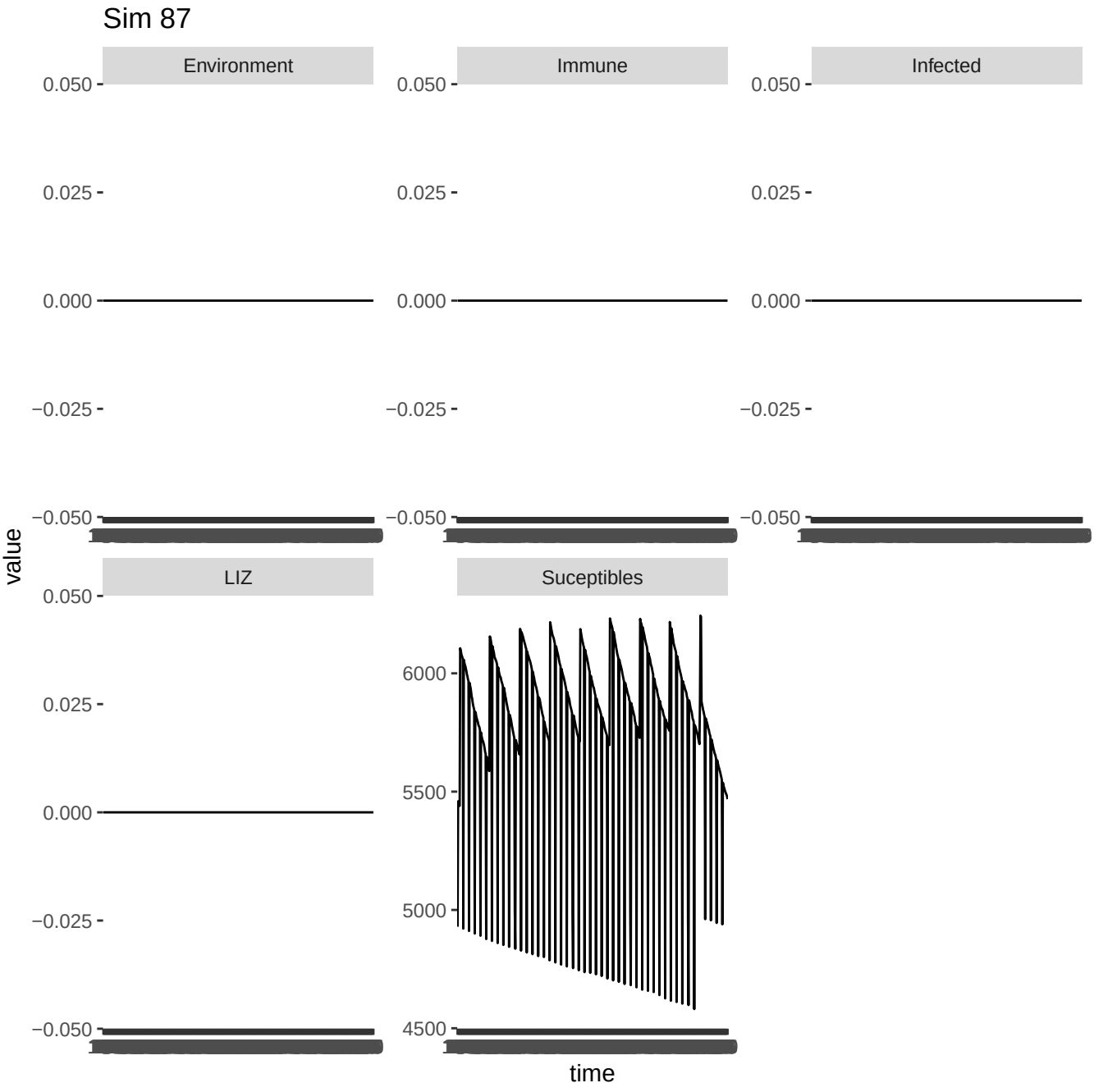

Environment
Immune
Infected
LIZ
Suceptibles
value
time
2.0
1.5
1.0
0.5
0.0
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
4500

Sim 85

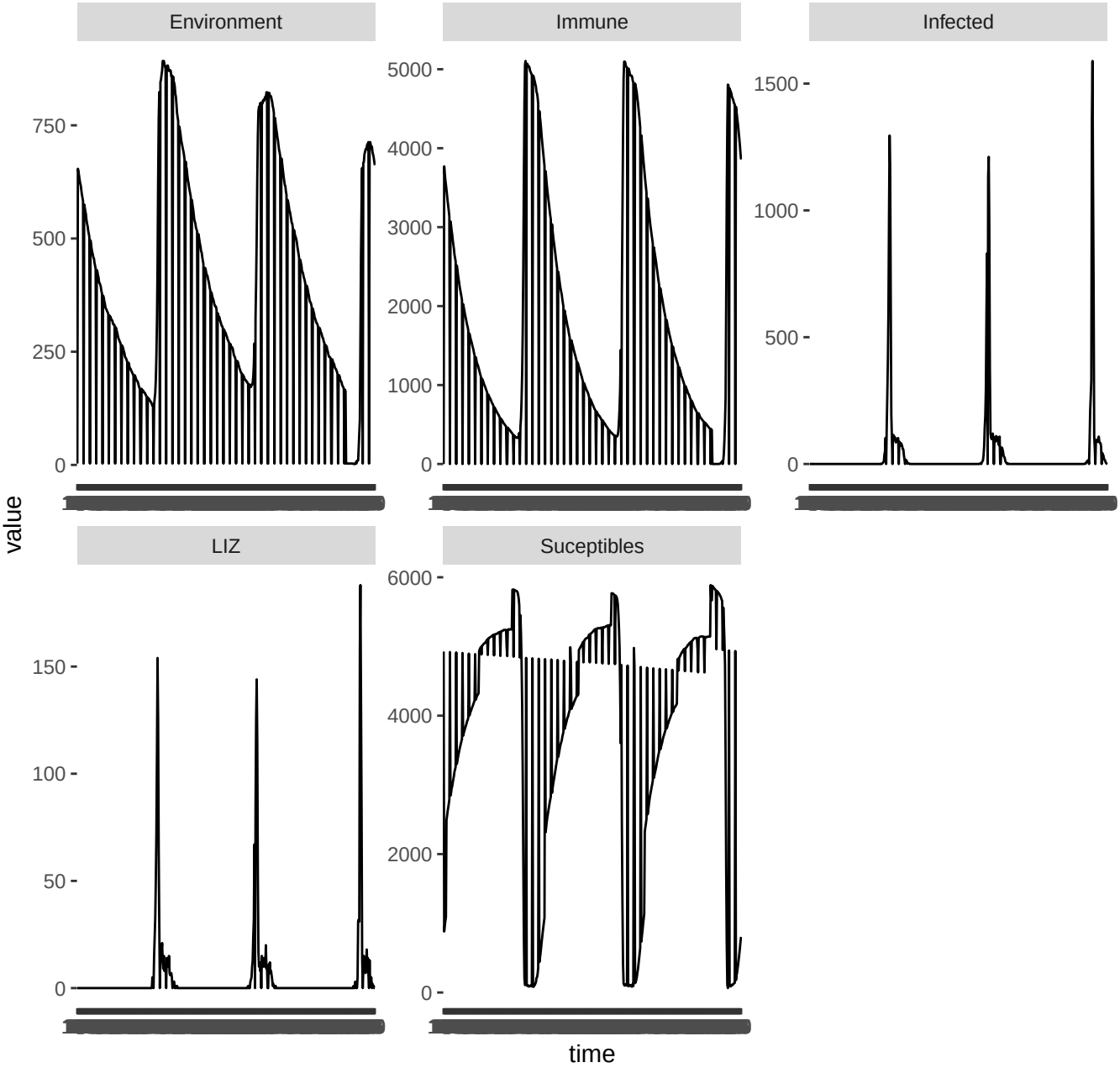

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

Sim 86

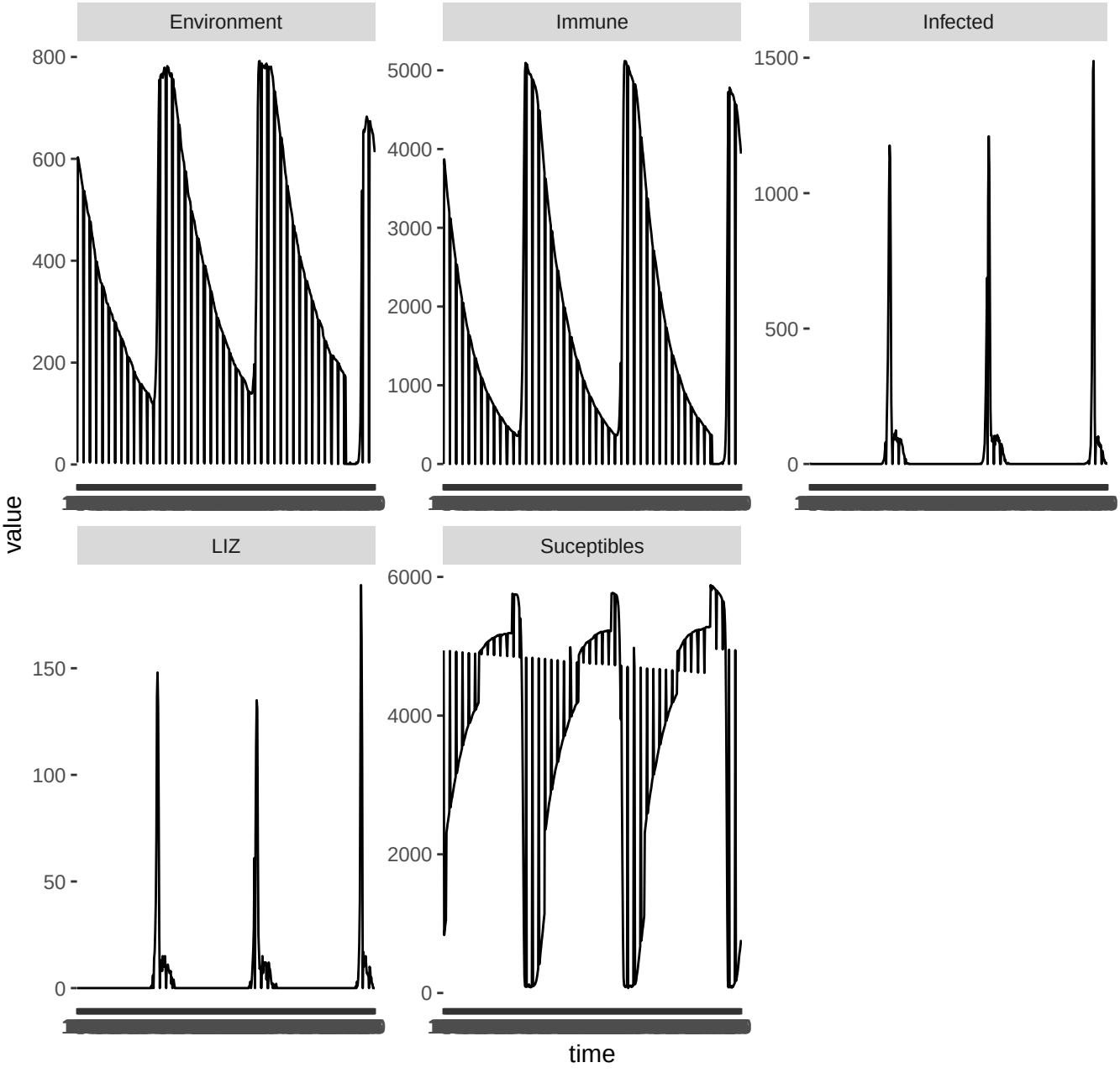

Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
2000
1500
1000
500
0
250
200
150
100
50
0
6000
4000
2000
0


Sim 87
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
4500
value
time

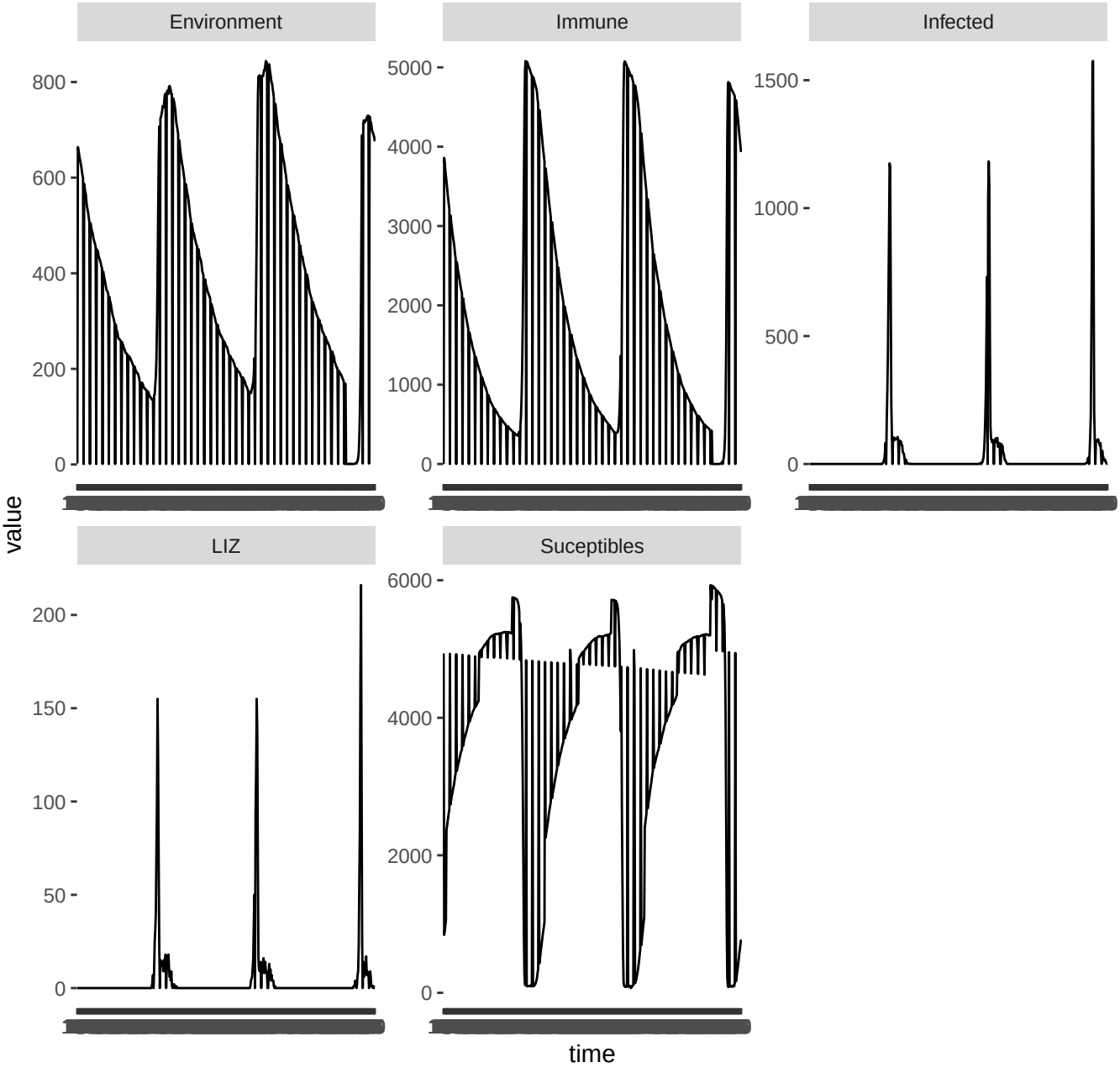
Sim 88


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150

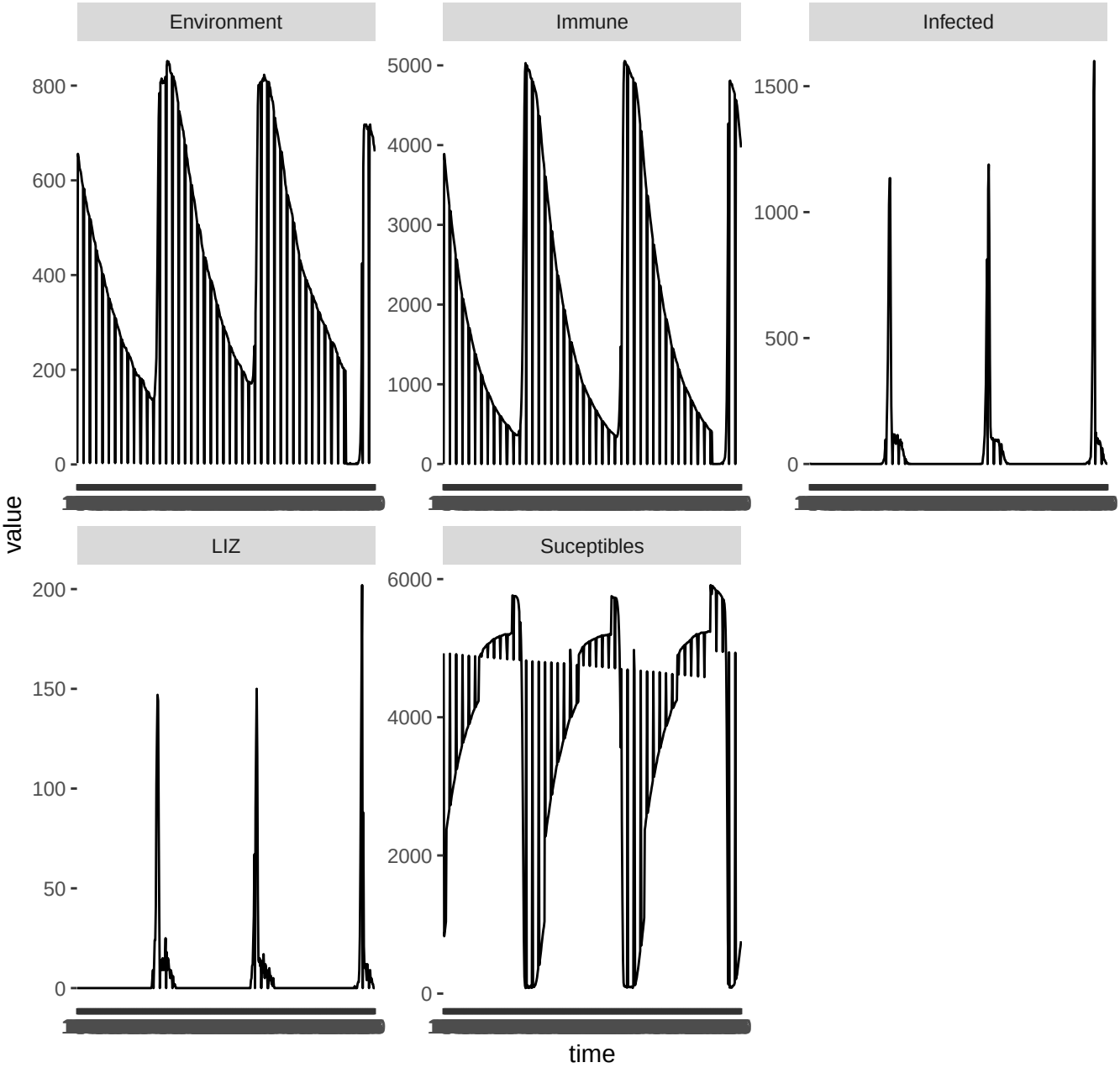
Sim 89

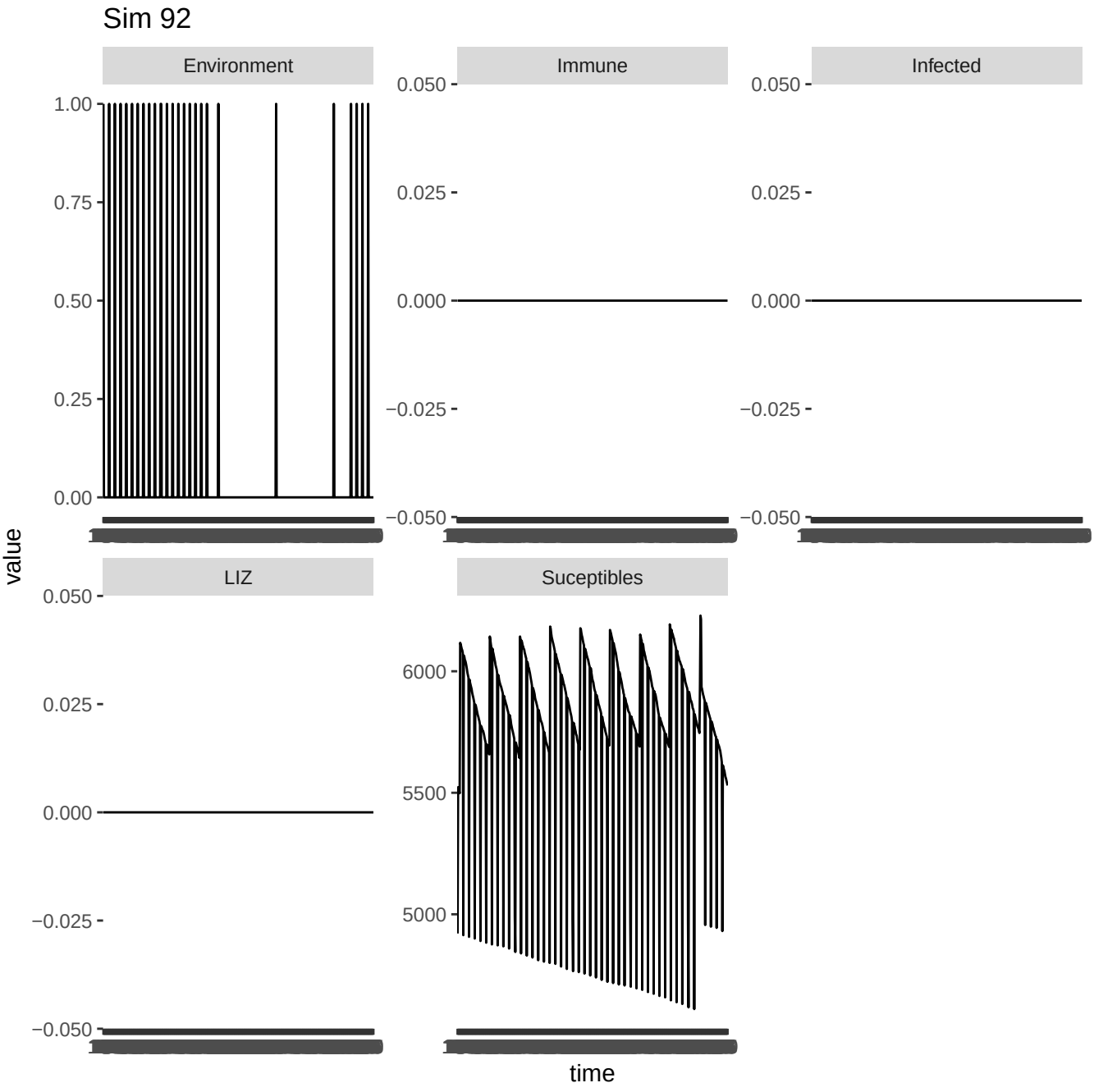

Environment
Immune
Infected
LIZ
Suceptibles
value
time
800
600
400
200
0
5000
4000
3000
2000
1000
0
1500
1000
500
0
150
100
50
0
6000
4000
2000
0

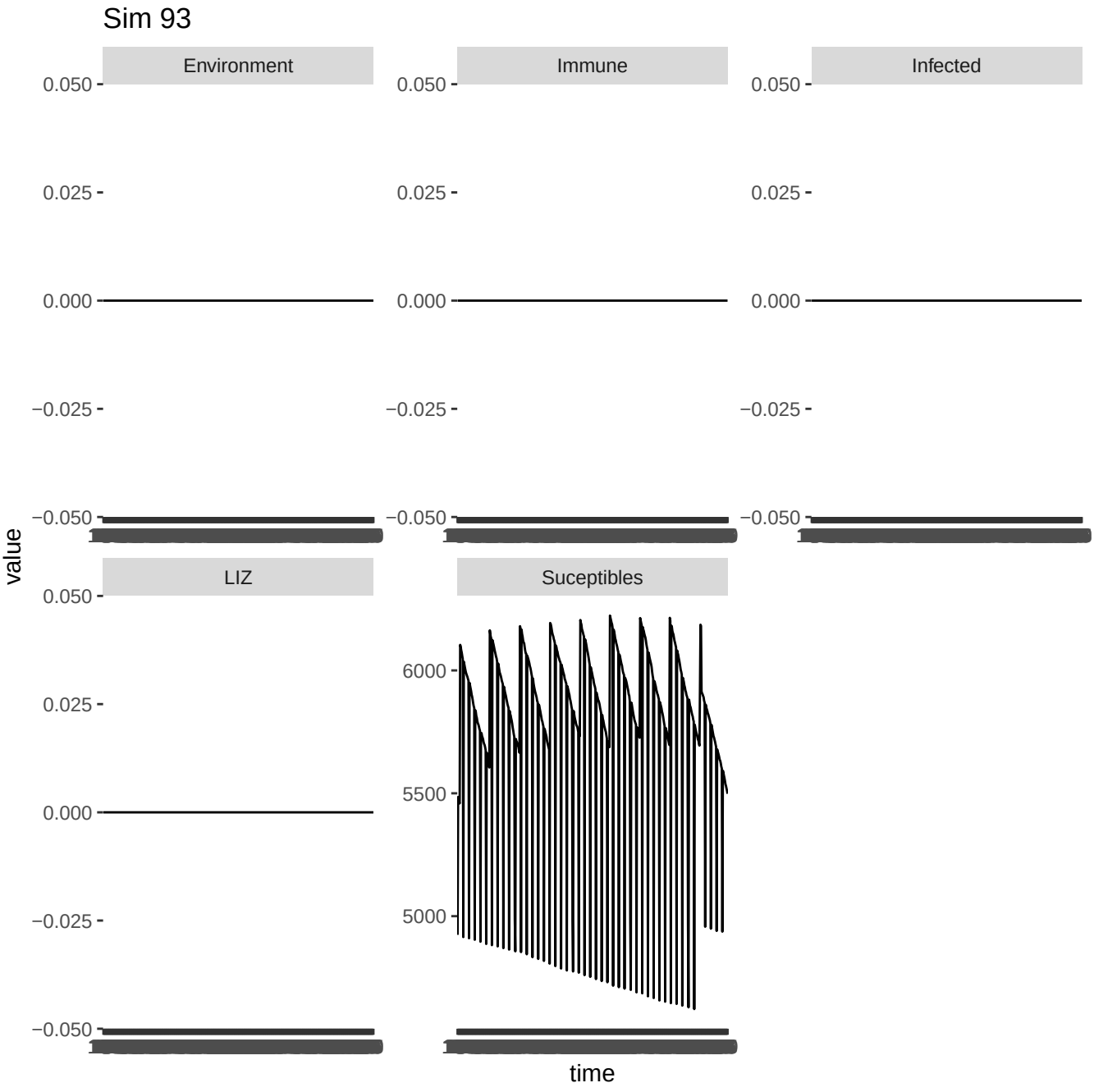
Sim 90

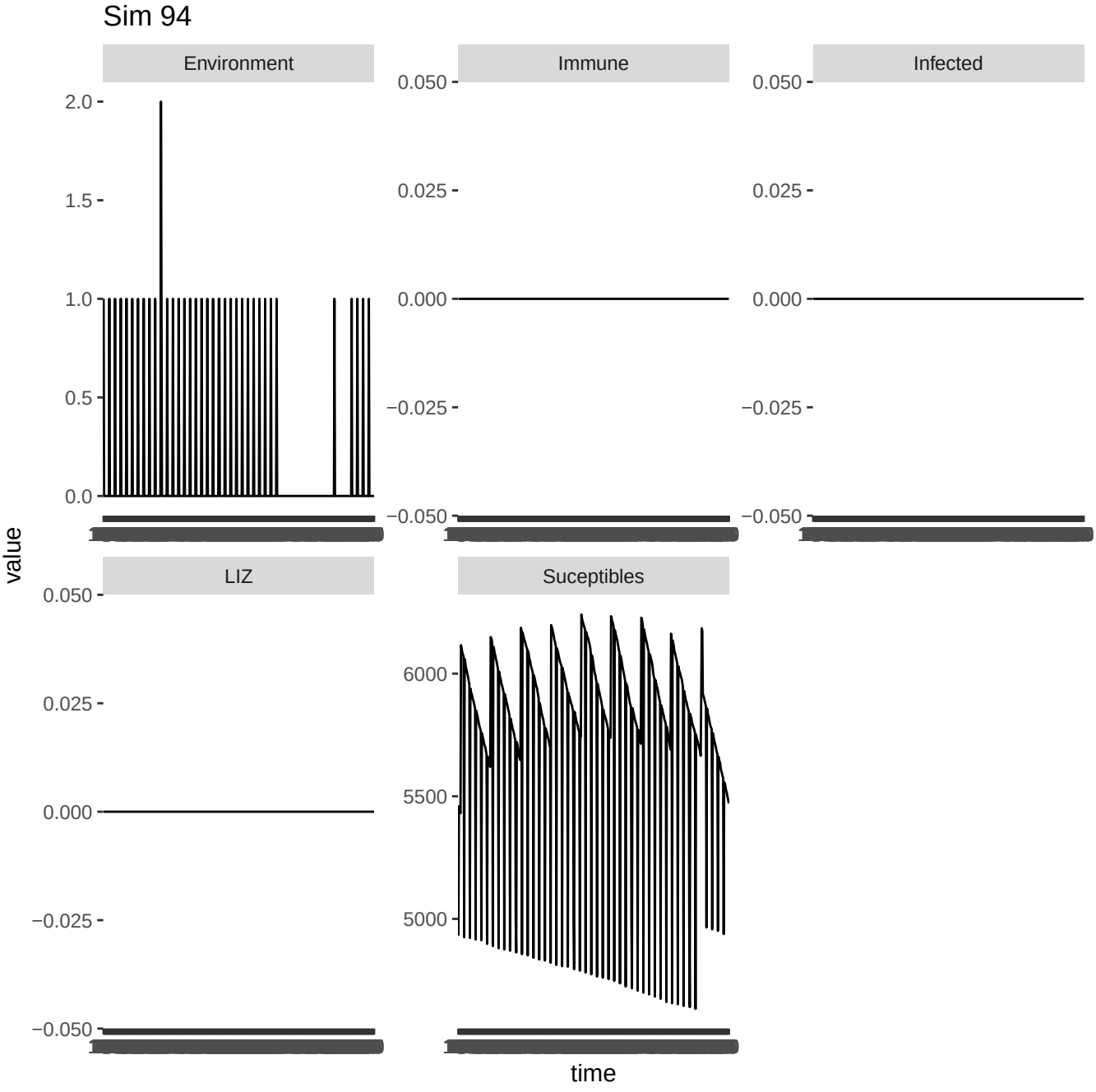

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

Sim 91

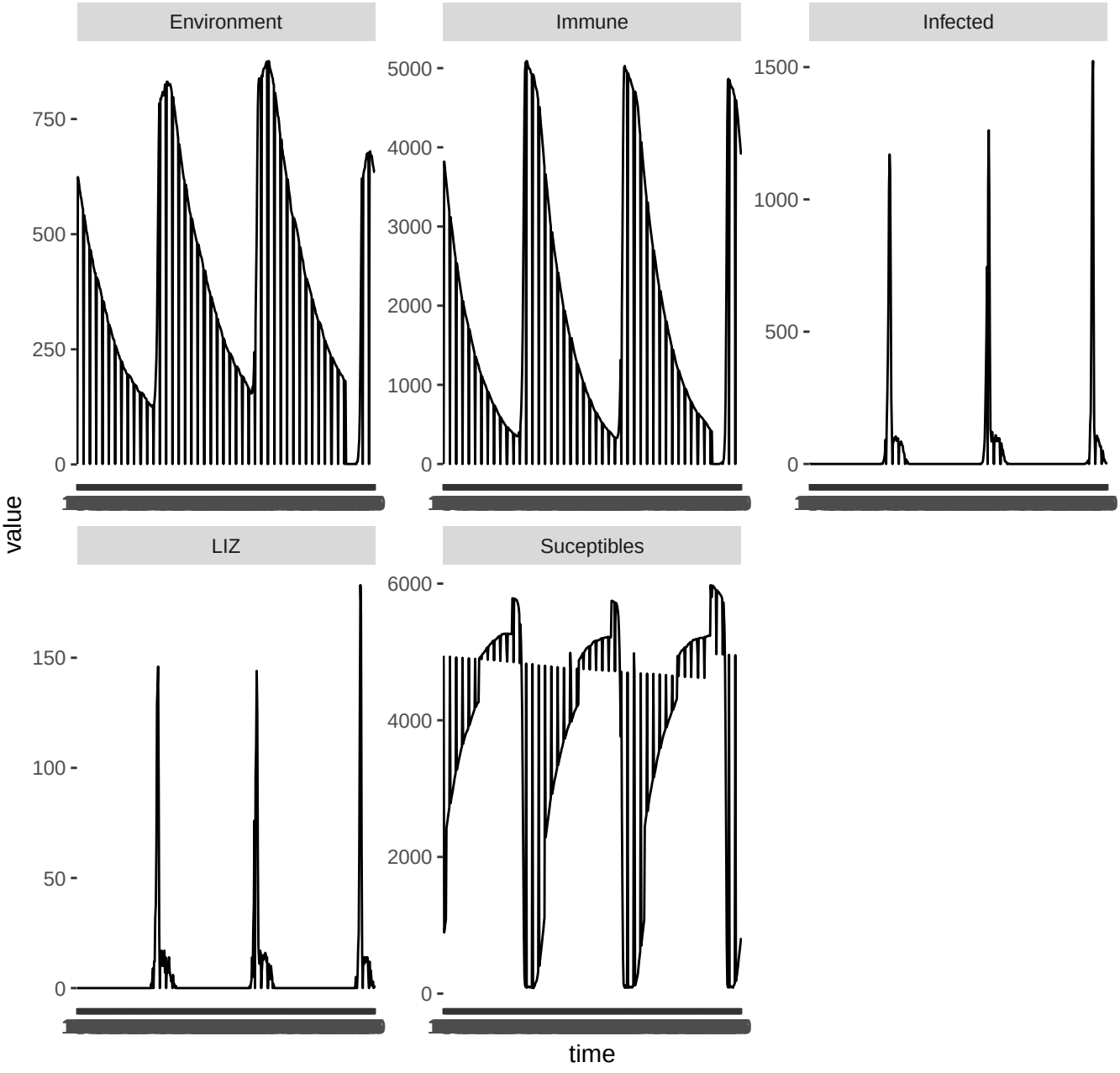

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000


Sim 92
Environment
Immune
Infected
LIZ
Suceptibles
value
time
1.00
0.75
0.50
0.25
0.00
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

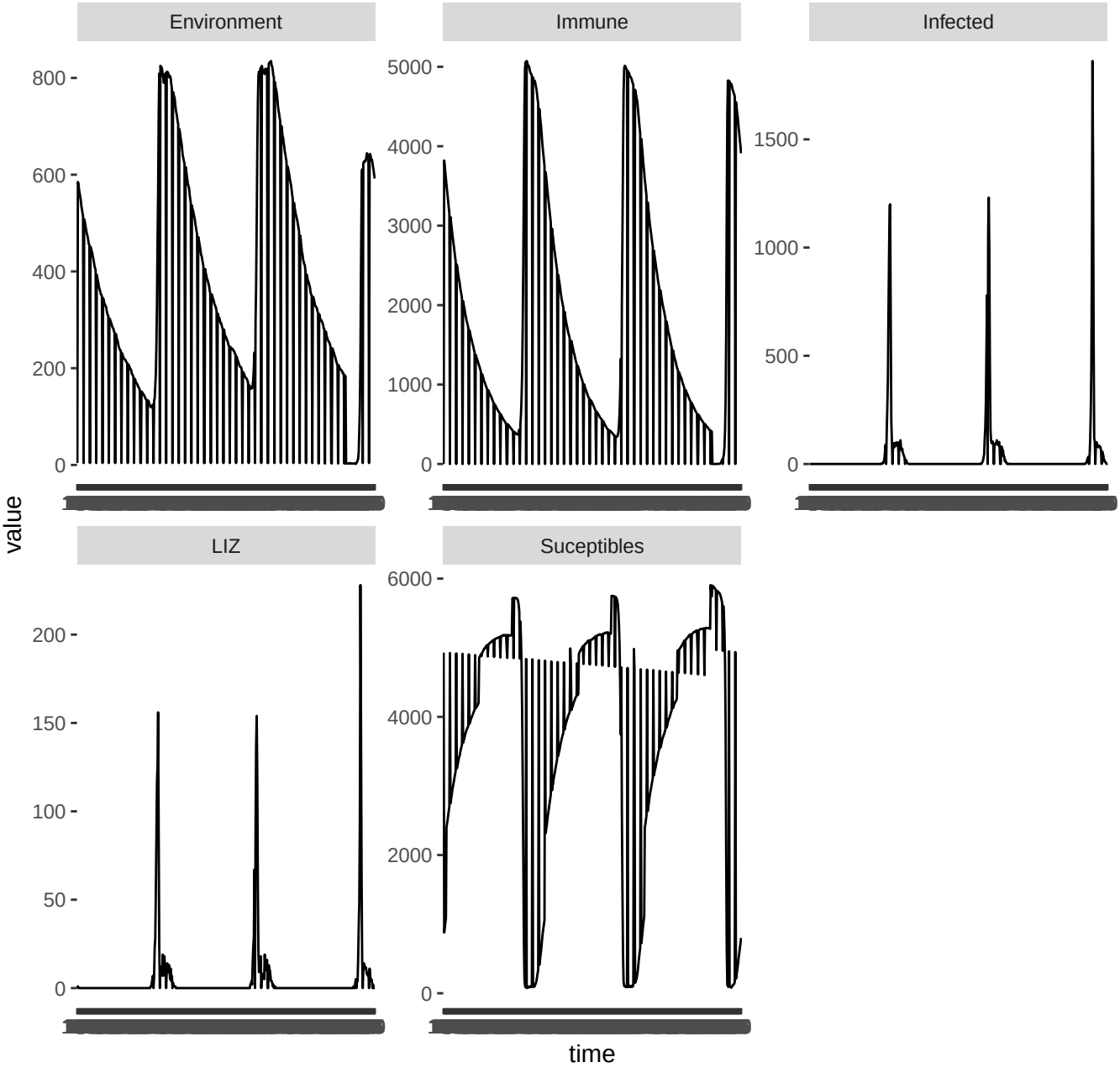

Sim 93
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time


Sim 94
Environment
Immune
Infected
LIZ
Suceptibles
value
time
2.0
1.5
1.0
0.5
0.0
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000

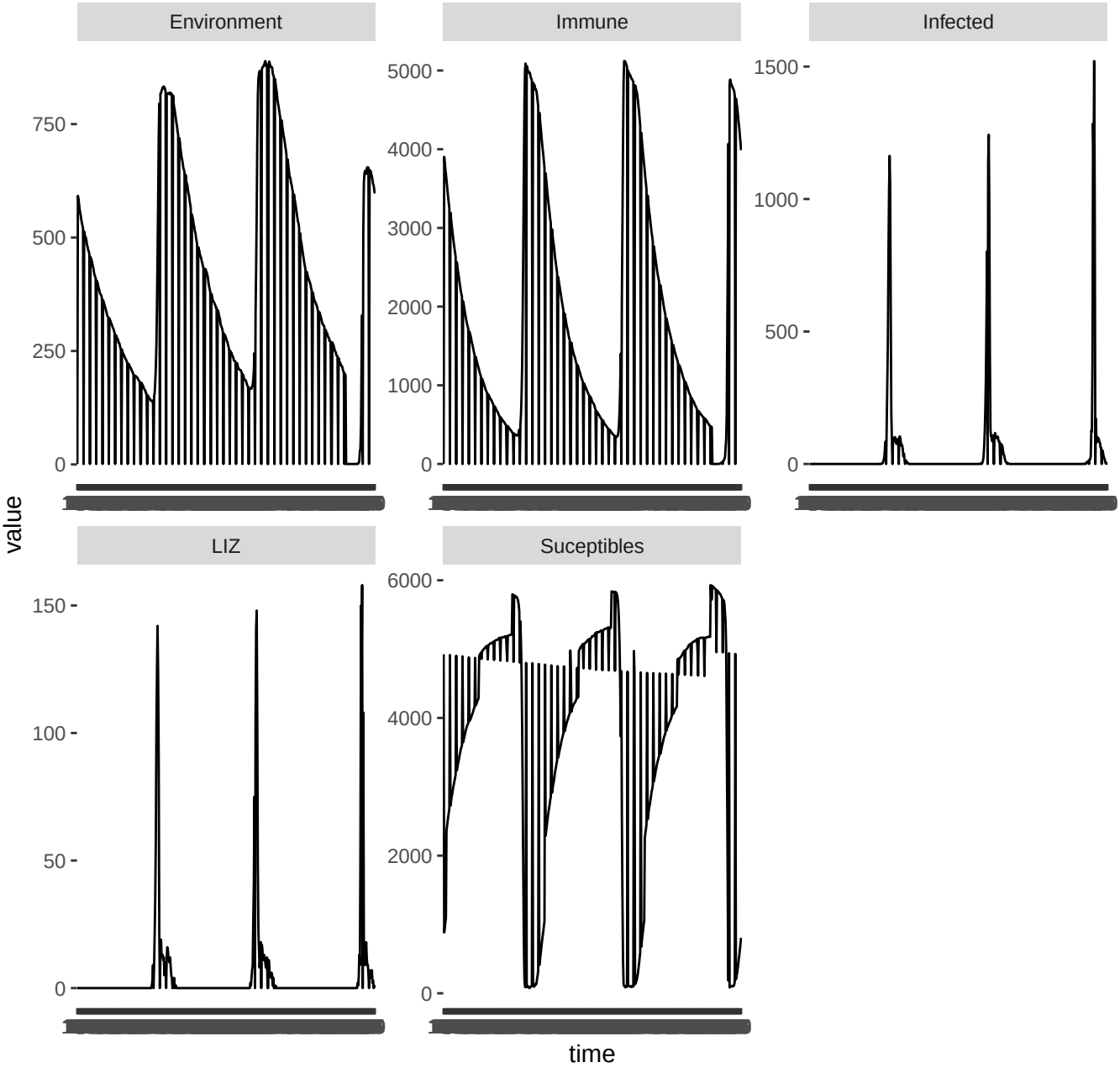
Sim 95

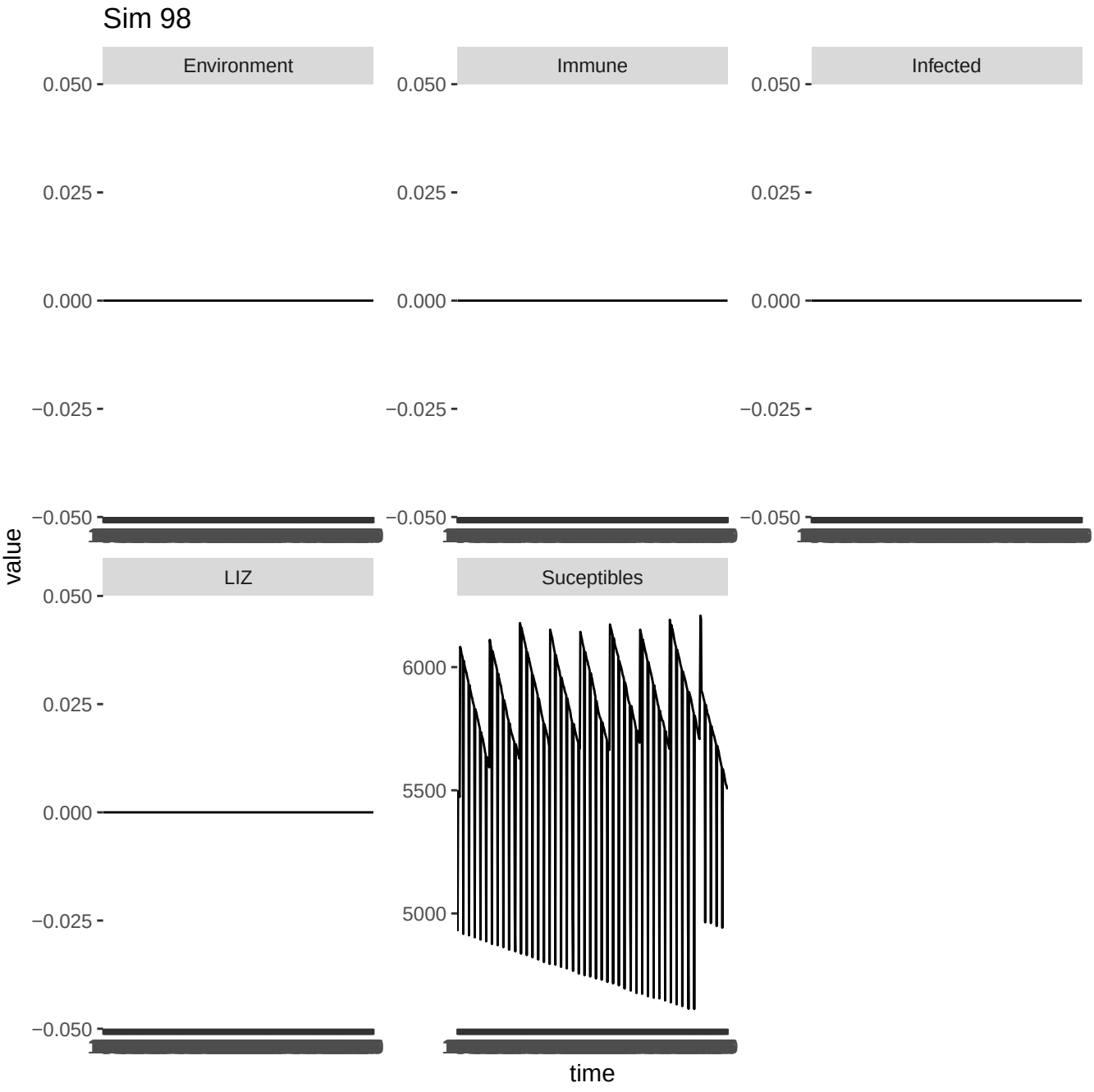

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150

Sim 96

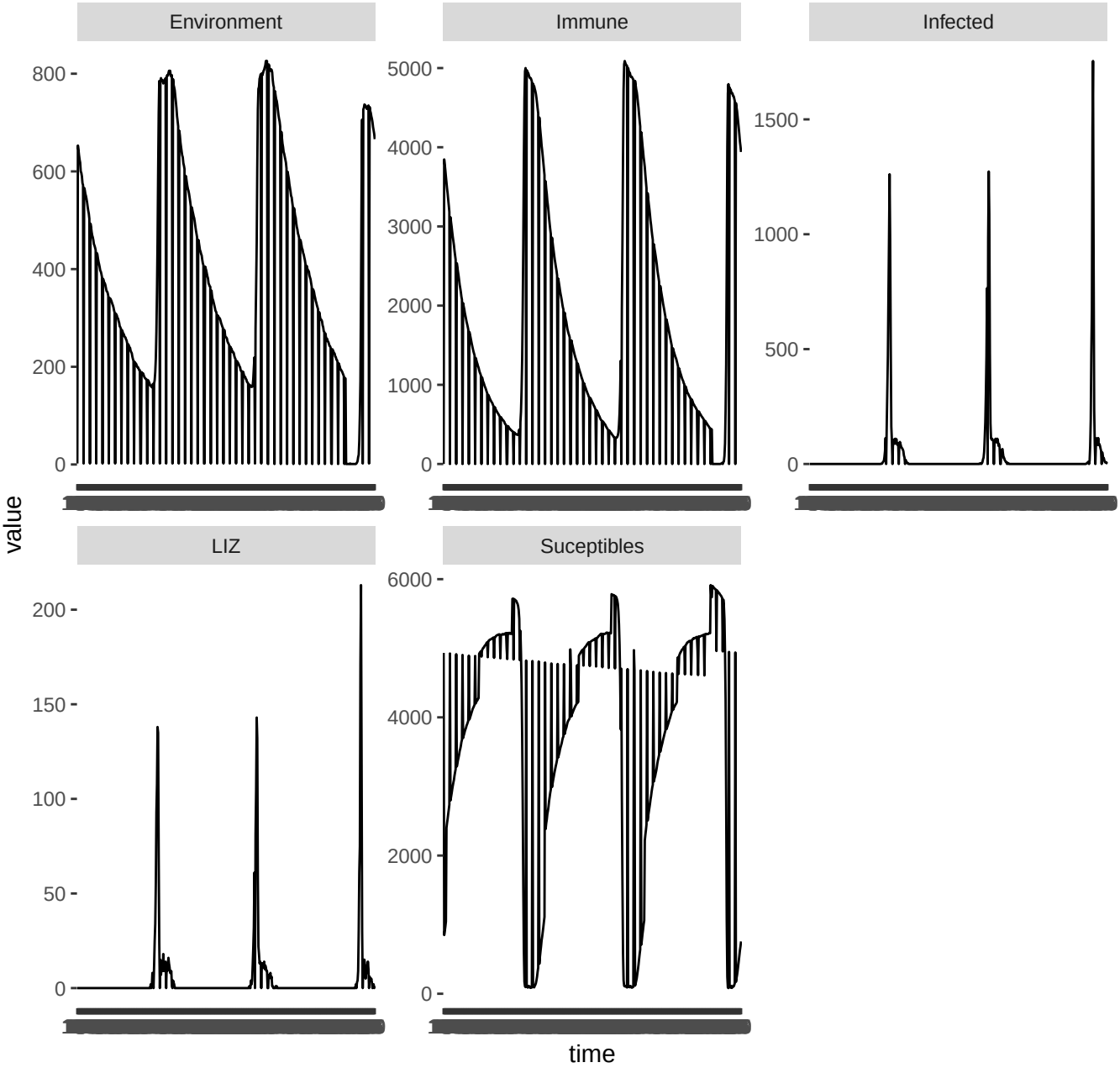

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

Sim 97

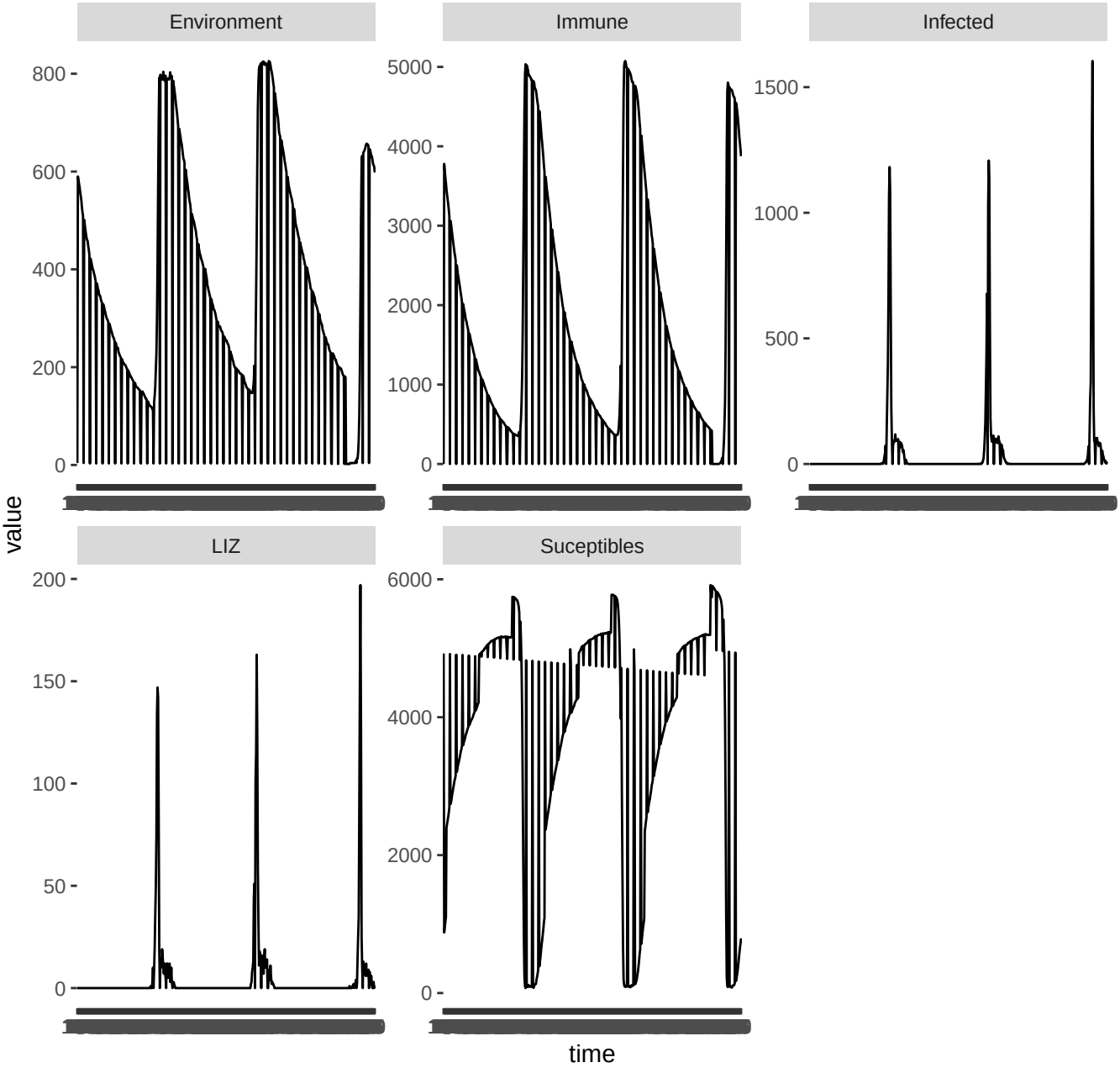

Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
250
500
750
1000
1500
2000
3000
4000
5000
6000
50
100
150


Sim 98
Environment
Immune
Infected
LIZ
Suceptibles
0.050
0.025
0.000
−0.025
−0.050
6000
5500
5000
value
time

Sim 99


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000

Sim 100


Environment
Immune
Infected
LIZ
Suceptibles
value
time
0
200
400
600
800
1000
2000
3000
4000
5000
500
1500
50
100
150
6000