

MSM4PCoD Task 3C Update

13 October 2023

Example Trends

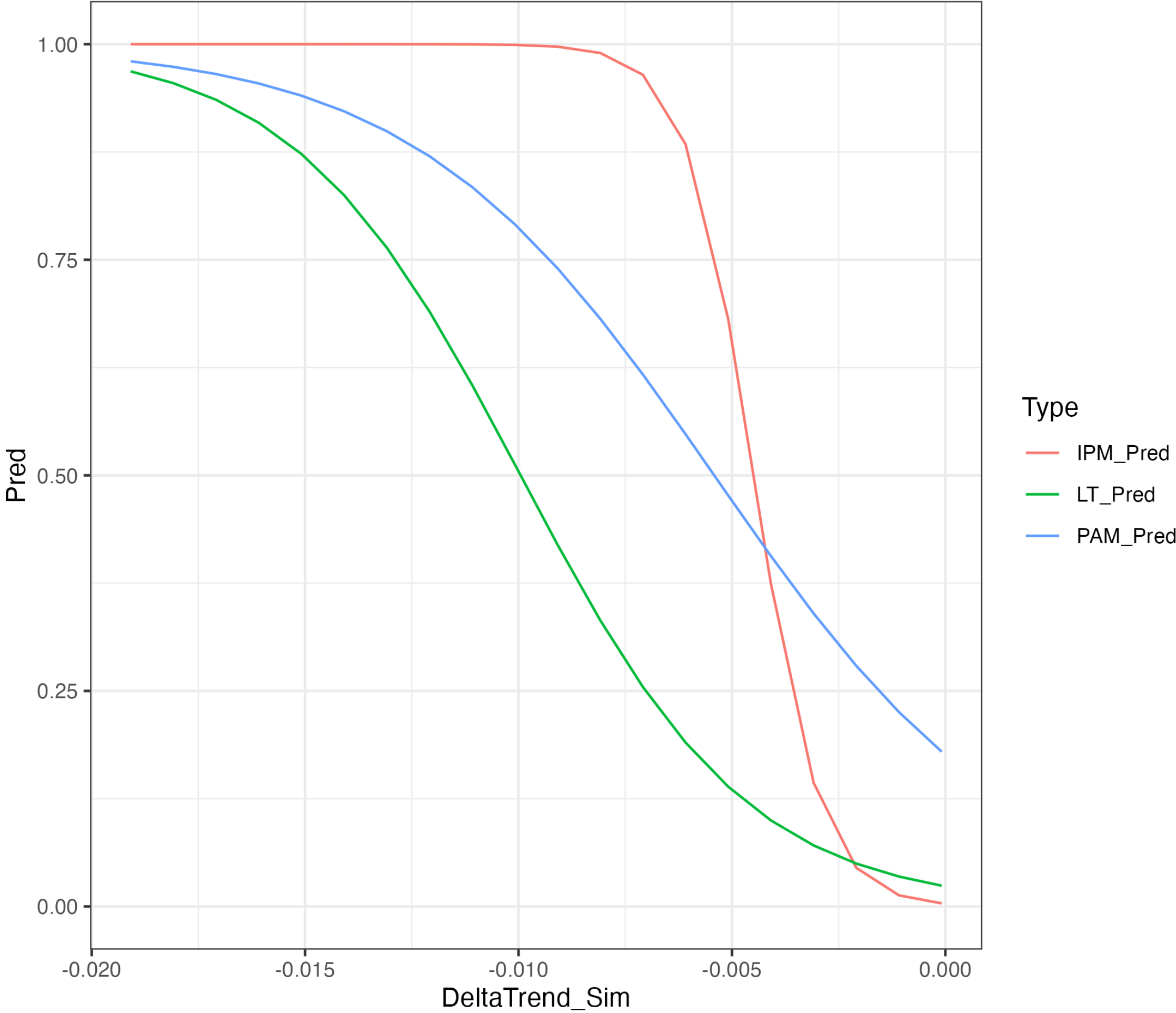
$$N_t = N_0 \cdot \exp(rt)$$

- A DeltaTrend of -0.005 is approx. equivalent to:
 - 5% decline over 10 years
- A DeltaTrend of -0.01 is approx. equivalent to:
 - 22% decline over 25 years
 - 10% decline over 10 years
- A DeltaTrend of -0.02 is approx. equivalent to:
 - 50% decline over 35 years
 - 40% decline over 25 years
 - 20% decline over 10 years

Ideal Scenario

With Calf Data

- 95 yrs data collection
- Low CVs
 - LT CV = 0.3
 - PAM CV = 0.15



	0	-0.005	-0.01	-0.02
LT	0.02	0.14	0.50	0.98
PAM	0.18	0.47	0.79	0.98
IPM	0	0.66	1	1

Frequent Scenario

With Calf Data

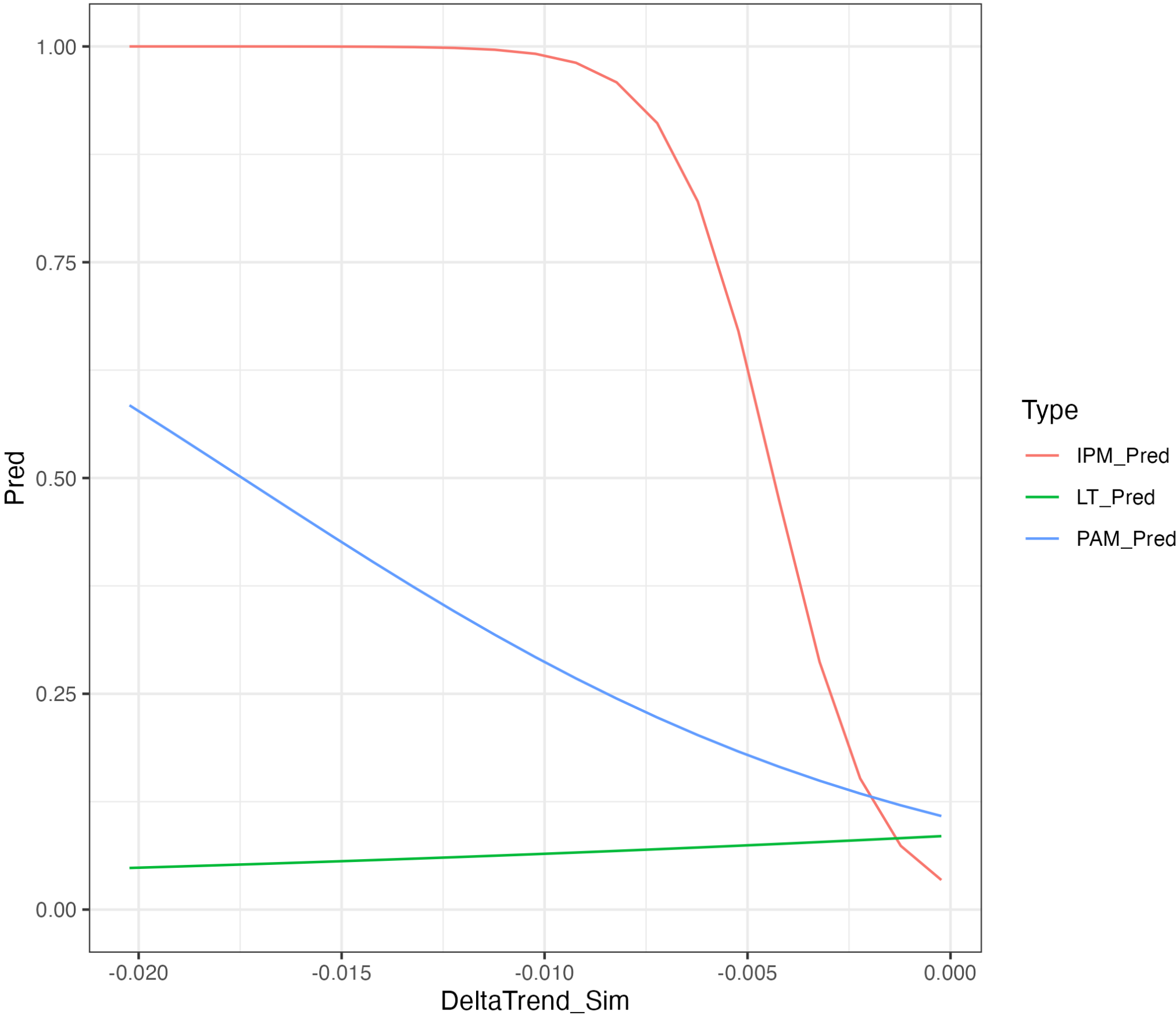
- 50 yrs data collection
- Moderate CVs
 - LT CV = 0.3
 - PAM CV = 0.15

	0	-0.005	-0.01	-0.02
LT				
PAM				
IPM				

Optimistic Scenario

With Calf Data

- 30 yrs data collection
 - LT data every 5 yrs
- Moderate CVs
 - LT CV = 0.4
 - PAM CV = 0.25

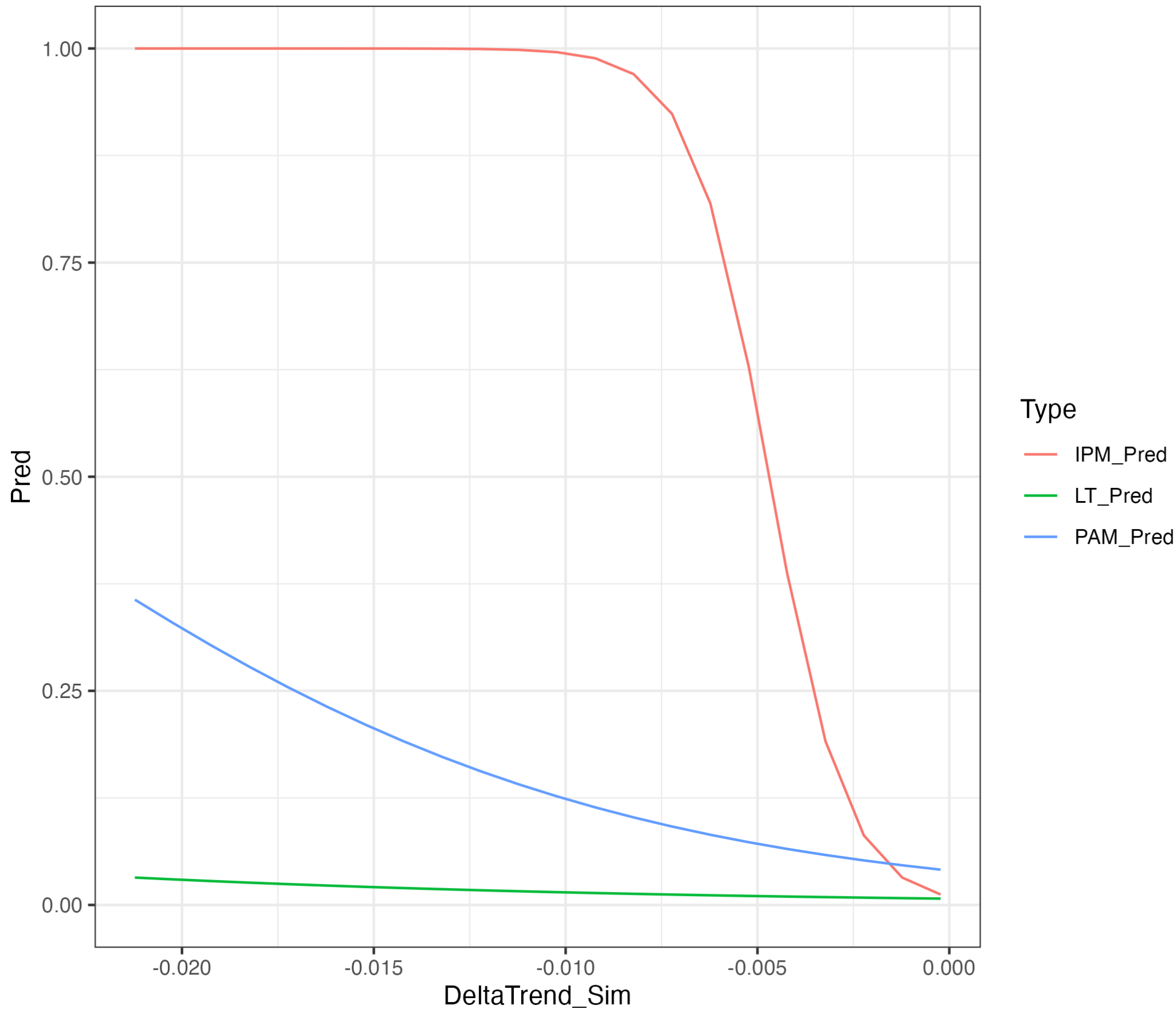


	0	-0.005	-0.01	-0.02
LT	0.09	0.07	0.06	0.05
PAM	0.11	0.18	0.29	0.58
IPM	0.03	0.63	0.99	1

Realistic Scenario

With Calf Data

- 30 yrs data collection
- LT data every 5 yrs
- High CVs
 - LT CV = 0.6
 - PAM CV = 0.35

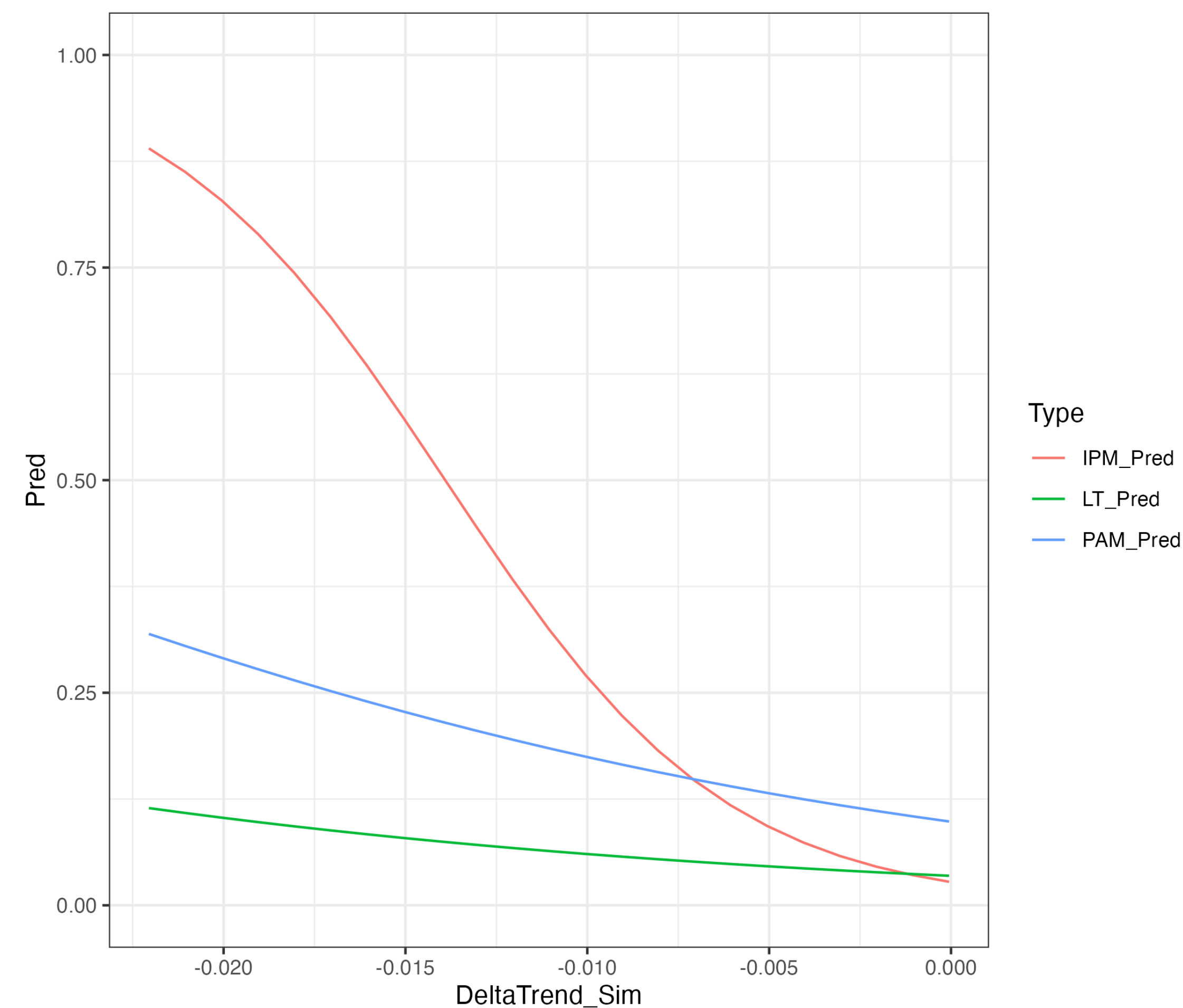


	0	-0.005	-0.01	-0.02
LT	0.01	0.01	0.01	0.03
PAM	0.04	0.07	0.12	0.32
IPM	0.01	0.57	0.99	1

Realistic Scenario

Without Calf Data

- 30 yrs data collection
- LT data every 5 yrs
- High CVs
 - LT CV = 0.6
 - PAM CV = 0.35



	0	-0.005	-0.01	-0.02
LT	0.03	0.05	0.06	0.10
PAM	0.10	0.13	0.17	0.29
IPM	0.03	0.09	0.27	0.83