

TABLE S10 | Observed coefficient estimates from Multiple Regression on distance Matrices (MRM) models using Binomial (MRM_glm) error distribution on the Turnover and Nestedness components of taxonomic, phylogenetic and trait beta diversity from the Amazon River basin.

predictors	TaxoBsim	pvalue	TaxoBsne	pvalue	PhyloBsim3k	pvalue	PhyloBsne3k	pvalue	Fun_Bsim	pvalue	Fun_Bsne	pvalue
(Intercept)	0.07	0	-1.78	0	-1.16	0	-1.65	0	-2.51	0	-0.93	0
D_energ_s	-0.16	0.43	0.24	0.22	-0.21	0.15	0.3	0.33	-0.39	0.17	0.31	0.41
D_water_s	-0.02	0.87	-0.24	0.04	0.02	0.82	-0.29	0.12	0.11	0.51	-0.34	0.12
D_temp_s	0.37	0.05	-0.16	0.36	0.15	0.28	0.39	0.17	-0.14	0.59	0.58	0.09
D_Habitat_size_s	-0.06	0.43	-0.01	0.88	0.05	0.4	-0.22	0.07	0.06	0.58	-0.26	0.08
D_Habitat_Div_s	0.15	0.04	-0.03	0.65	0.09	0.09	0.12	0.31	0.02	0.82	0.21	0.11
D_Habitat_harsh_s	0.4	0	-0.1	0.28	0.25	0	0.14	0.32	0.15	0.3	0.24	0.17
D_Habitat_position_s	0.14	0.21	-0.15	0.18	0.03	0.73	0.09	0.61	0.04	0.8	0.04	0.84
D_Habitat_fragm_s	0.02	0.77	-0.05	0.5	-0.02	0.79	-0.02	0.85	-0.13	0.26	-0.02	0.87
D_Habitat_water_s	-0.2	0	0.13	0.07	-0.12	0.01	0.07	0.51	-0.07	0.44	0.04	0.74
D_Habitat_SampEff_s	-0.07	0.4	0.57	0	-0.25	0	0.79	0	-0.58	0	0.92	0
D_Marine_Incurs_s	-0.24	0.06	-0.16	0.18	-0.13	0.15	-0.33	0.07	-0.29	0.1	-0.5	0.04
D_CurrentLGM_s	0.17	0.1	0.15	0.15	0.13	0.09	0.16	0.28	0.22	0.14	0.1	0.58
D_Pebas23mya_s	-0.22	0.05	-0.05	0.61	-0.13	0.1	-0.14	0.41	-0.09	0.58	-0.31	0.13
D_hydro_s	-0.03	0.54	-0.06	0.26	0.03	0.49	-0.17	0.04	0.16	0.04	-0.27	0.01
D_spat_s	0.54	0	-0.14	0.18	0.4	0	-0.06	0.72	0.2	0.17	0.17	0.42
dev	324.39	4640	503.48	4640	186.92	4640	557.08	4640	409.81	4640	1229.52	4640



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