

Table 4. Unconditional associations between the outcome variable (virus isolation positive) and the 24 explanatory variables in LBM

Variable	AIV positive	Bird	OR (95%CI)	P-value (ANOVA)
District				
Binh Minh	18	157	Ref	0.174
Long Ho	25	160	1.43(0.75 - 2.74)	
Mang Thit	30	160	1.78(0.95 - 3.35)	
Tam Binh	21	183	1(0.51 - 1.95)	
Sampling round				
2016	29	316	Ref	<0.001
2017	65	344	2.31(1.44 - 3.68)	
Career experience (year)				
1-5	23	143	Ref	0.001
6-10	48	436	0.65(0.38 - 1.1)	
>10	4	10	3.48(0.91 - 13.3)	
Unidentified	19	71	1.91(0.96 - 3.8)	
Selling area				
In LBM	77	616	Ref	<0.001
Out LBM	17	44	4.41(2.3 - 8.46)	
Direct access of seller to the farm				
No	5	204	Ref	<0.001
Yes	89	456	9.65(3.86 - 24.15)	
The origin of poultry from the trader				
No	70	446	Ref	0.117
Yes	24	214	0.68(0.41 - 1.11)	
Support the idea that the disease situation was heavily depended on poultry trading				
No	42	253	Ref	0.175
Yes	52	407	0.74(0.47 - 1.14)	
Support the idea that demand of customer heavily influence on poultry trading				
No	82	454	Ref	<0.001
Yes	12	206	0.28(0.15 - 0.53)	
Manage the poultry business via the contract with farmer				
No	27	143	Ref	0.081
Yes	67	517	0.64(0.39 - 1.05)	
Poultry business was the main income				
No	38	380	Ref	<0.001
Yes	56	280	2.25(1.44 - 3.51)	
Assume AI already existed inside of poultry				
No	0	95	Ref	<0.001
Yes	94	565	NA(NA - NA)	
Assume AIV was transmitted by contact with other domestic bird				
No	78	487	Ref	0.023
Yes	16	173	0.53(0.3 - 0.94)	

Support the idea that the source of AI was PDS				
No	88	515	Ref	<0.001
Yes	6	145	0.21(0.09 - 0.49)	
Experience of receiving the AI information from the vet				
No	52	273	Ref	0.003
Yes	42	387	0.52(0.33 - 0.8)	
Confirmation by vet as first-check when buying the poultry.				
No	89	650	Ref	0.007
Yes	5	10	6.3(1.79 - 22.21)	
Willingness to report the outbreak in your workplace				
No	81	615	Ref	0.008
Yes	13	45	2.68(1.35 - 5.32)	
Willingness to report the outbreak in your workplace to the vet				
No	39	341	Ref	0.033
Yes	55	319	1.61(1.04 - 2.51)	
Gain AI knowledge via the training in the TV program				
No	53	331	Ref	0.191
Yes	41	329	0.75(0.48 - 1.16)	
Gain AI knowledge via the neighbor in the LBM				
No	61	346	Ref	0.008
Yes	33	314	0.55(0.35 - 0.86)	
Willingness to eat the infected poultry with AIVs				
No	93	558	Ref	<0.001
Yes	1	102	0.05(0.01 - 0.36)	
Willingness to report to Vet once you notify infected poultry				
No	94	646	Ref	0.037
Yes	0	14	NA(NA - NA)	
Positive to separate the new poultry separately				
No	93	624	Ref	0.017
Yes	1	36	0.16(0.02 - 1.21)	
Keep the remain poultry over night at home				
No	38	226	Ref	0.177
Yes	56	434	0.73(0.47 - 1.15)	
Keep the remain poultry over night at LBM				
No	26	311	Ref	<0.001
Yes	68	349	2.65(1.64 - 4.29)	