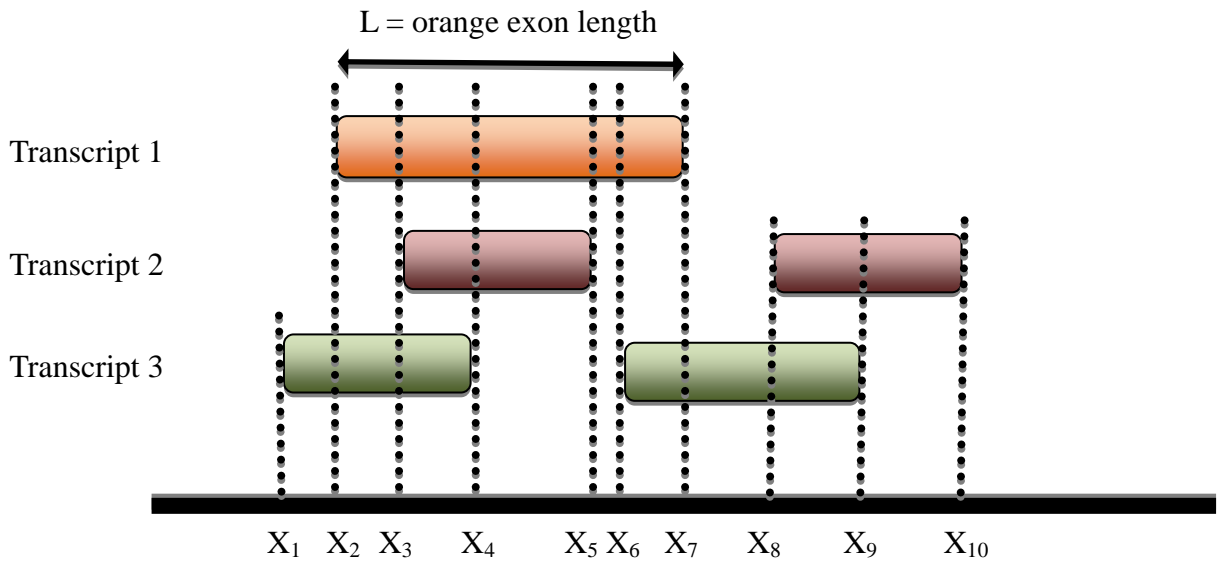


Supplementary Figure S1

Definition of Weighted Exon Frequency (WEF)

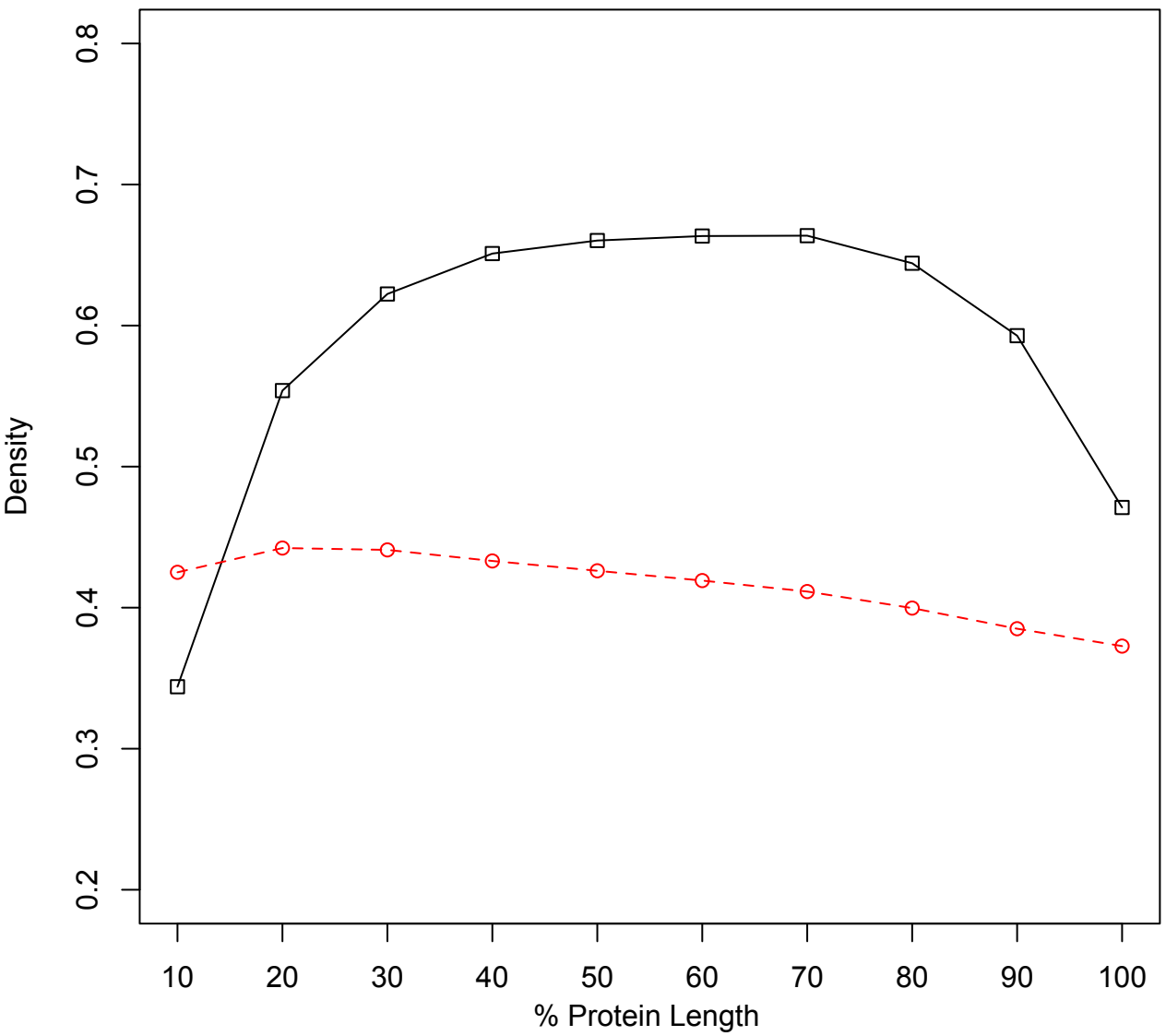


WEF of the orange exon =

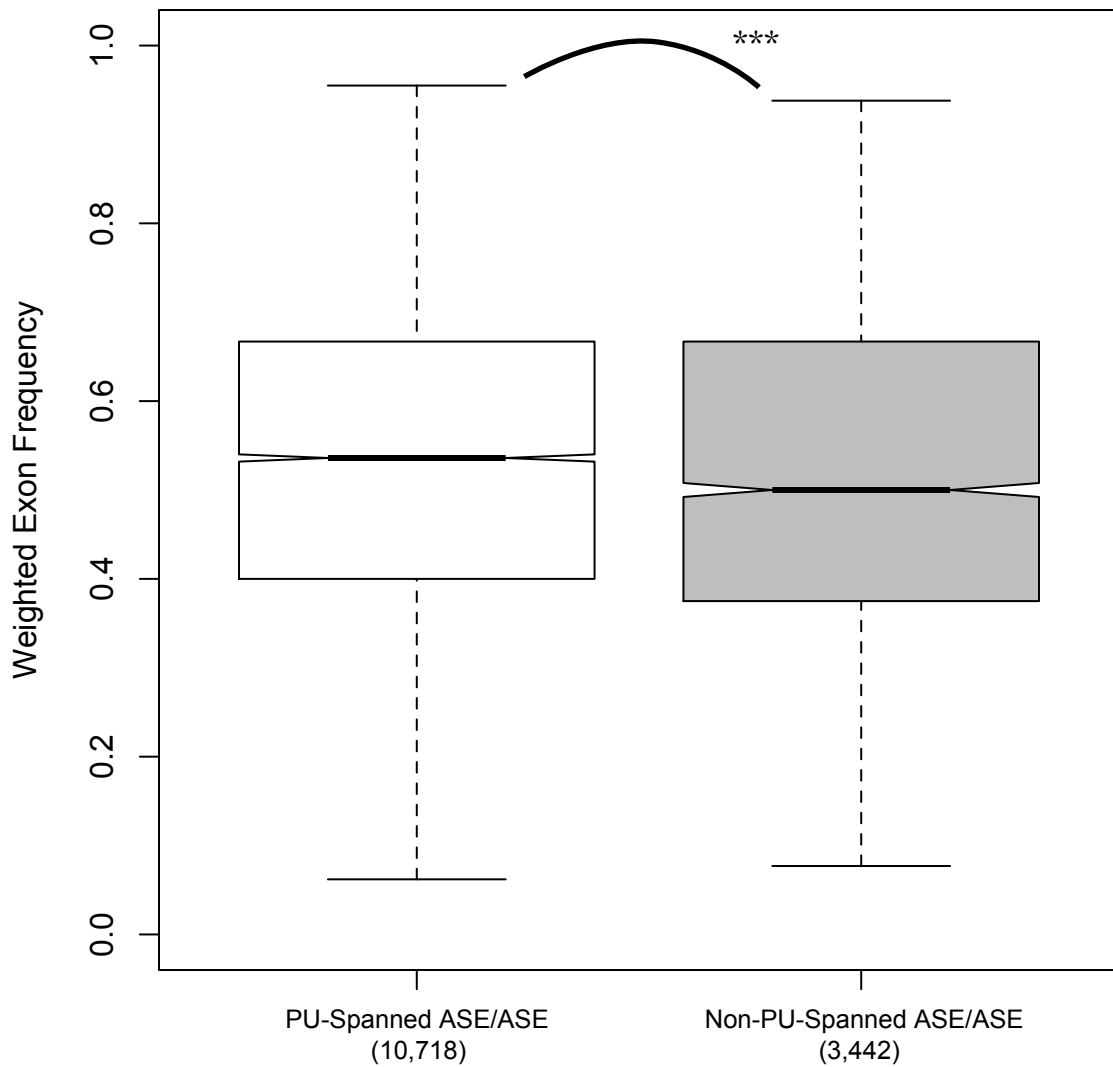
$$(X_3 - X_2)/L * 2/3 + (X_4 - X_3)/L * 3/3 + (X_5 - X_4)/L * 2/3 + (X_6 - X_5)/L * 1/3 + (X_7 - X_6)/L * 2/3$$

Supplementary Figure S2

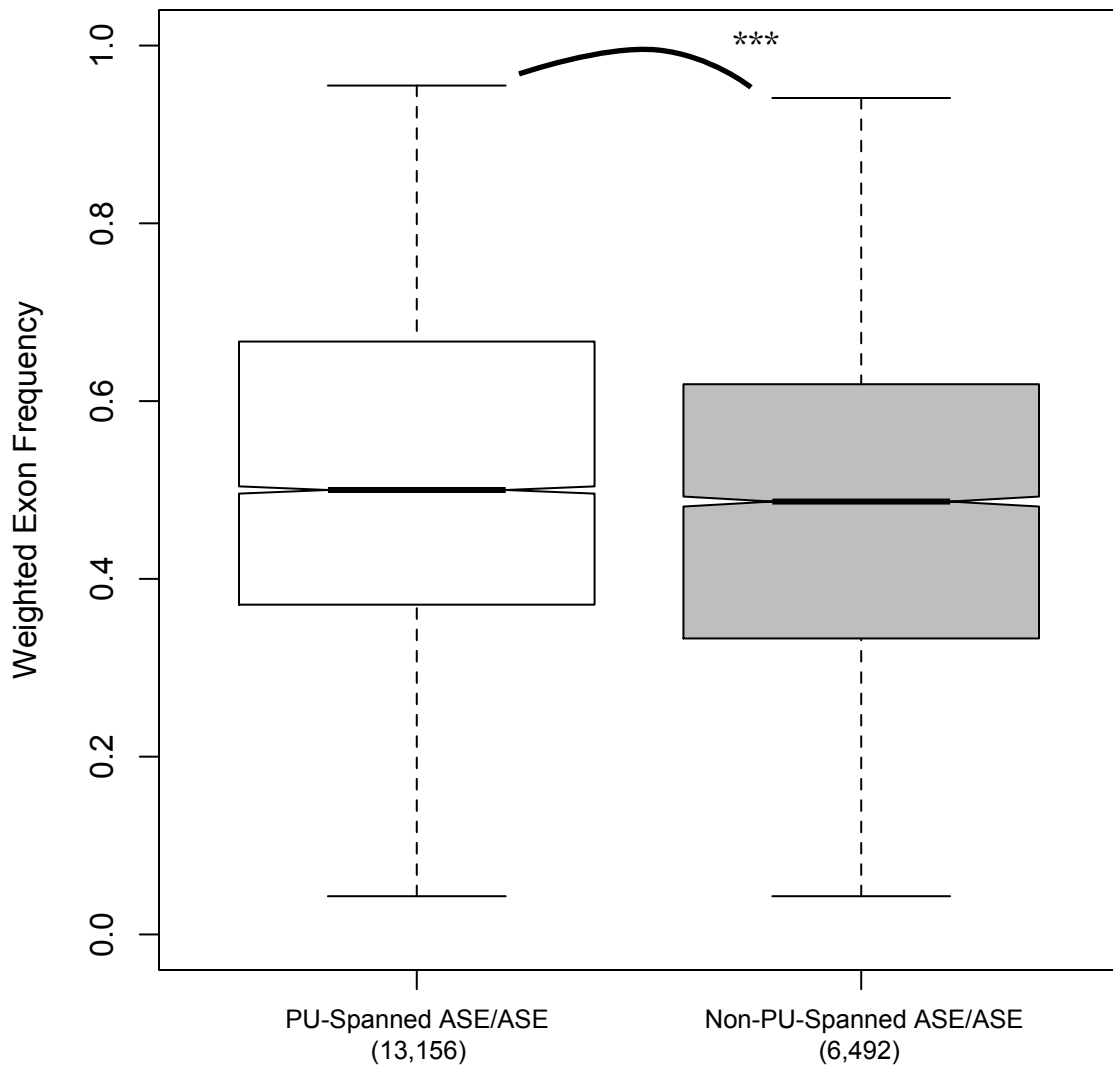
□ PU
○ CSE



Supplementary Figure S3

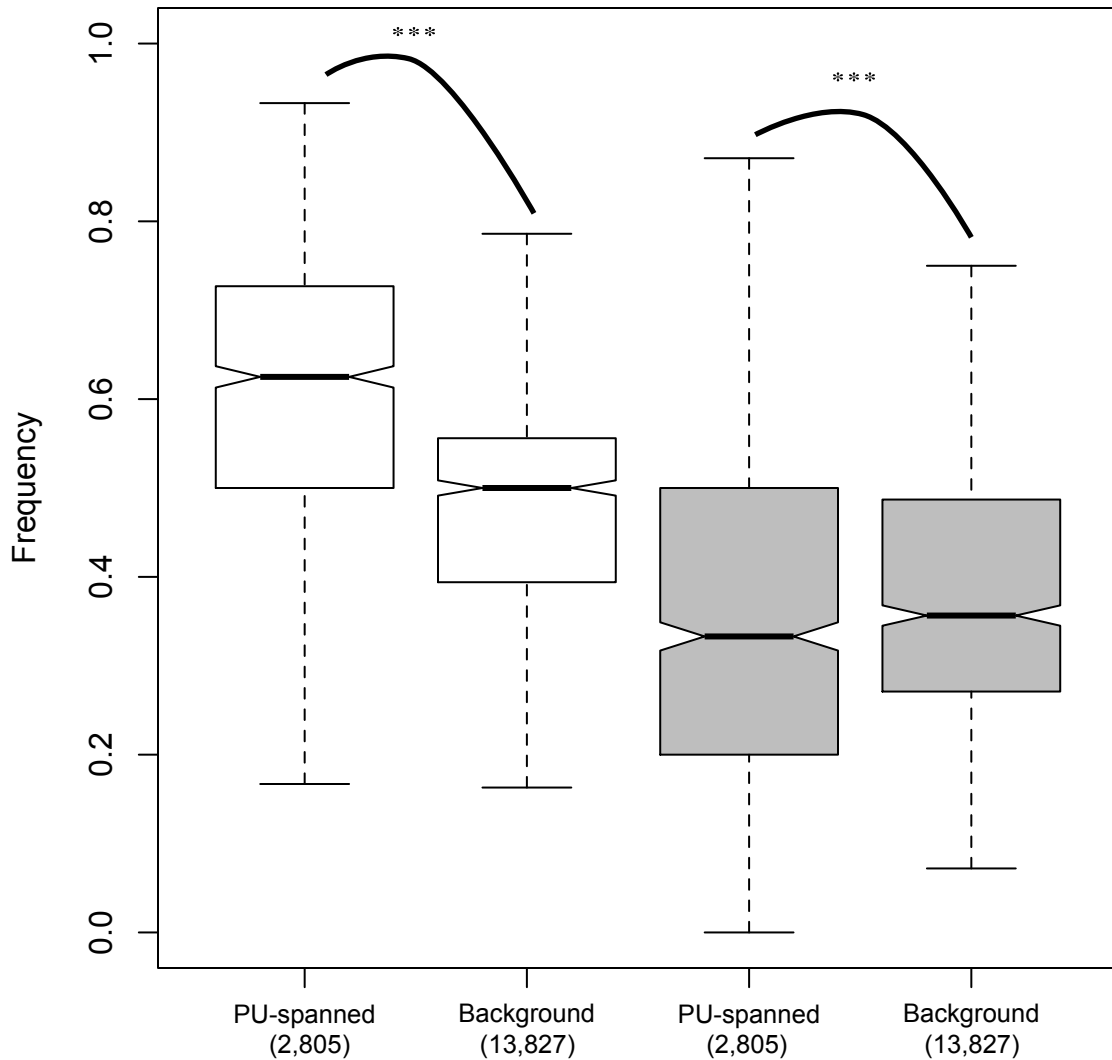


Supplementary Figure S4A

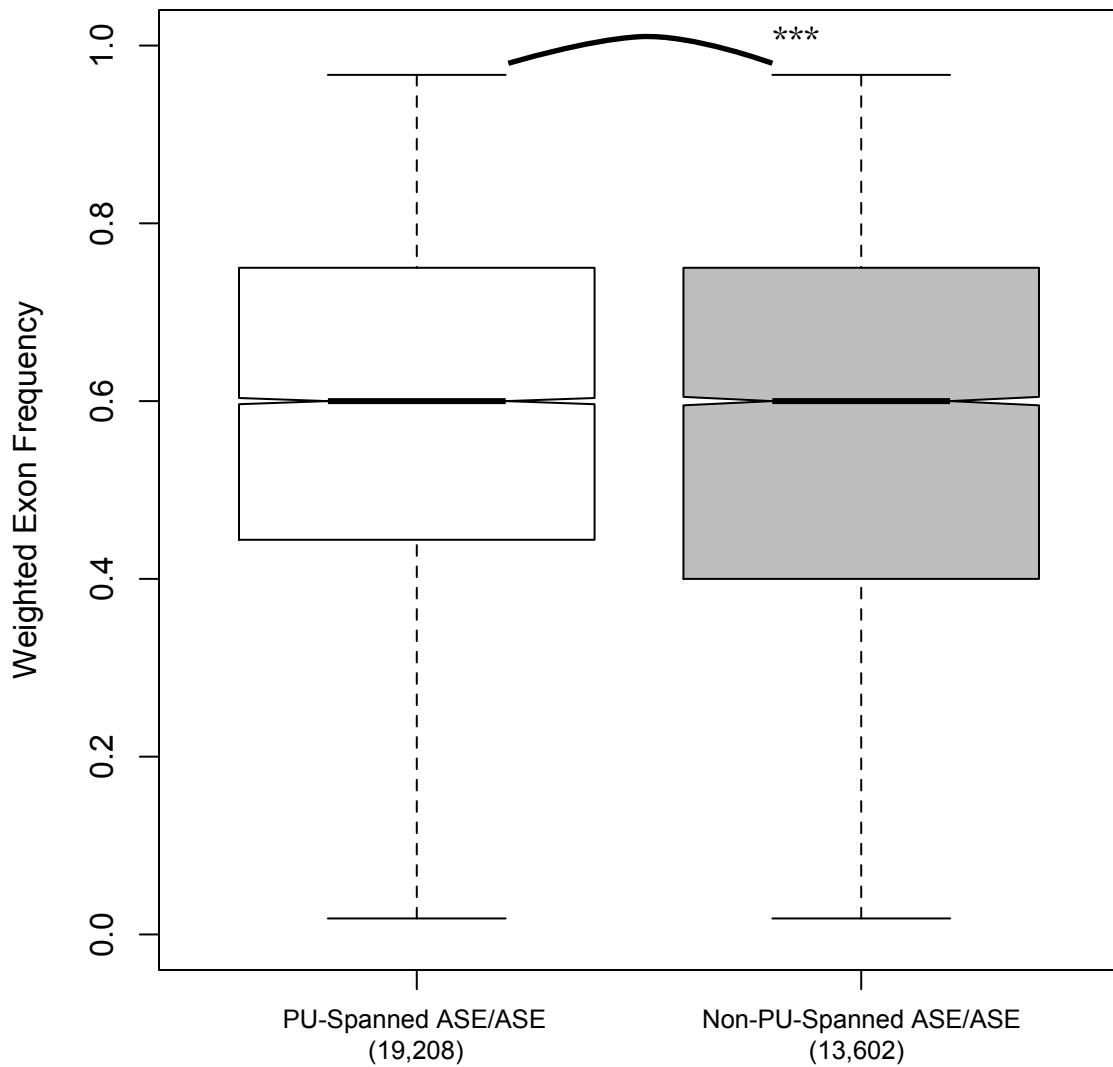


Supplementary Figure S4B

Co-Present
Co-Absent



Supplementary Figure S5



Supplementary Figure S6

Supplementary Table S1. The numbers (percentages) of CSEs and ASEs that contain complete PUs. Note that the CSEs and ASEs analyzed here are composed of only amino acid residues predicted to be structurally ordered.

	#Analyzed exons	#Observed ¹	#Expected ²	O/E ³
CSE	3,297 (24.6%)	1,267	1,054	1.20
ASE	10,093 (75.4%)	3,016	3,229	0.93

¹Observed number of exons that contains complete PUs.

²Expected number of exons that contains complete PUs.

³#Observed / #Expected.

Supplementary Table S2. The numbers (percentages) of CSEs and ASEs that contain complete PUs based on the UCSC dataset.

	#Analyzed exons	#Observed ¹	#Expected ²	O/E ³
CSE	20,234 (62.46%)	6,535	5,729	1.14
ASE	12,161 (37.54%)	2,636	3,443	0.77

¹Observed number of exons that contains complete PUs.

²Expected number of exons that contains complete PUs.

³#Observed / #Expected.

Supplementary Table S3. The numbers (percentages) of PU-spanned exon boundaries based on the UCSC dataset.

	#Analyzed	#PU-spanned	#Expected ¹	O/E ²
Constitutive boundary	16,383 (55.7%)	7,155	6,409	1.12
Non-constitutive boundary	13,014 (44.3%)	4,351	5,097	0.85

¹Expected number of PU-spanned exon pairs. For constitutive boundary: $(7155+4351)*0.557 = 6409$; for non-constitutive boundary: $(7155+4351)*0.443 = 5097$.

²#PU-spanned / #Expected.

Supplementary Table S4. The numbers (percentages) of CSEs and ASEs that contain complete PUs according to the mouse data.

	#Analyzed exons	#Observed ¹	#Expected ²	O/E ³
CSE	5,843 (69.4%)	1,614	1,372	1.18
ASE	2,574 (30.6%)	362	604	0.60

¹Observed number of exons that contain complete PUs

²Expected number of exons that contain complete PUs

³#Observed / #Expected

Supplementary Table S5. The numbers (percentages) of PU-spanned exon boundaries according to the mouse data.

	#Analyzed	#PU-spanned	#Expected ¹	O/E ²
Constitutive boundary	4,881 (63.2%)	1,987	1,696	1.17
Non-constitutive boundary	2,847 (36.8%)	697	988	0.71

¹Expected number of PU-spanned exon pairs. For constitutive boundary: $(1987+697)*0.632 = 1696$; for non-constitutive boundary: $(1987+697)*0.368 = 988$.

²#PU-spanned / #Expected.