

## Online Material: Measurement Invariance Analysis

Table S1: Compositional invariance test using permutation.

Agreeableness vs. Conscientiousness				Agreeableness vs. Extraversion			Agreeableness vs. Neuroticism		
	C = 1	95% CI	CIE?	C = 1	95% CI	CIE?	C = 1	95% CI	CIE?
SS	0.980	[0.960; 1.000]	YES	0.980	[0.966; 1.000]	YES	0.980	[0.968; 1.000]	YES
CV	0.999	[0.959; 1.000]	YES	0.999	[0.966; 1.000]	YES	0.999	[0.967; 1.000]	YES
PM	0.988	[0.930; 1.000]	YES	0.988	[0.940; 1.000]	YES	0.988	[0.939; 1.000]	YES
NV	0.968	[0.958; 1.000]	YES	0.968	[0.955; 1.000]	YES	0.968	[0.960; 1.000]	YES
PI	0.956	[0.950; 1.000]	YES	0.956	[0.949; 1.000]	YES	0.956	[0.940; 1.000]	YES
Agreeableness vs. Openness to Experience				Conscientiousness vs. Extraversion			Conscientiousness vs. Neuroticism		
	C = 1	95% CI	CIE?	C = 1	95% CI	CIE?	C = 1	95% CI	CIE?
SS	0.980	[0.977; 1.000]	YES	0.980	[0.969; 1.000]	YES	0.980	[0.963; 1.000]	YES
CV	0.999	[0.955; 1.000]	YES	0.999	[0.944; 1.000]	YES	0.999	[0.943; 1.000]	YES
PM	0.988	[0.945; 1.000]	YES	0.988	[0.933; 1.000]	YES	0.988	[0.959; 1.000]	YES
NV	0.968	[0.951; 1.000]	YES	0.968	[0.960; 1.000]	YES	0.968	[0.955; 1.000]	YES
PI	0.956	[0.938; 1.000]	YES	0.956	[0.933; 1.000]	YES	0.956	[0.944; 1.000]	YES
Conscientiousness vs. Openness to Experience				Extraversion vs. Neuroticism			Extraversion vs. Openness to Experience		
	C = 1	95% CI	CIE?	C = 1	95% CI	CIE?	C = 1	95% CI	CIE?
SS	0.980	[0.964; 1.000]	YES	0.980	[0.953; 1.000]	YES	0.999	[0.981; 1.000]	YES
CV	0.999	[0.946; 1.000]	YES	0.999	[0.979; 1.000]	YES	0.988	[0.966; 1.000]	YES

PM	0.988	[0.959; 1.000]	YES	0.988	[0.977; 1.000]	YES	0.968	[0.933; 1.000]	YES
NV	0.968	[0.955; 1.000]	YES	0.968	[0.952; 1.000]	YES	0.956	[0.937; 1.000]	YES
PI	0.956	[0.945; 1.000]	YES	0.956	[0.930; 1.000]	YES	0.980	[0.967; 1.000]	YES
Neuroticism vs. Openness to Experience									
	C = 1	95% CI	CIE?						
SS	0.980	[0.975; 1.000]	YES						
CV	0.999	[0.987; 1.000]	YES						
PM	0.988	[0.971; 1.000]	YES						
NV	0.968	[0.966; 1.000]	YES						
PI	0.956	[0.947; 1.000]	YES						

Notes: C=1: correlation value=1; CI: confidence interval; CIE: compositional invariance established?

Table S2: Equal mean assessment.

Agreeableness vs. Conscientiousness				Agreeableness vs. Extraversion			Agreeableness vs. Neuroticism		
	D = 0	95% CI	EMV?	D = 0	95% CI	EMV?	D = 0	95% CI	EMV?
SS	-0.321	[-0.245; 0.256]	NO	-0.387	[-0.245; 0.288]	NO	-0.334	[-0.1895; 0.256]	NO
CV	-0.373	[-0.423; 0.530]	YES	-0.332	[-0.423; 0.554]	YES	-0.346	[-0.523; 0.522]	YES
PM	-0.156	[-0.345; 0.423]	YES	-0.165	[-0.345; 0.488]	YES	-0.367	[-0.451; 0.423]	YES
NV	-0.235	[-0.377; 0.398]	YES	-0.276	[-0.377; 0.486]	YES	-0.145	[-0.345; 0.456]	YES
PI	-0.165	[-0.345; 0.487]	YES	-0.304	[-0.345; 0.423]	YES	-0.276	[-0.256; 0.287]	YES
Agreeableness vs. Openness to Experience				Conscientiousness vs. Extraversion			Conscientiousness vs. Neuroticism		
	D = 0	95% CI	EMV?	D = 0	95% CI	EMV?	D = 0	95% CI	EMV?
SS	-0.366	[-0.173; 0.166]	NO	-0.214	[-0.157; 0.162]	NO	-0.134	[-0.244; 0.256]	NO
CV	-0.254	[-0.377; 0.387]	YES	-0.362	[-0.389; 0.331]	YES	-0.263	[-0.356; 0.341]	YES
PM	-0.187	[-0.366; 0.376]	YES	-0.255	[-0.333; 0.311]	YES	-0.235	[-0.342; 0.389]	YES
NV	-0.288	[-0.305; 0.312]	YES	-0.275	[-0.365; 0.364]	YES	-0.400	[-0.433; 0.456]	YES
PI	-0.241	[-0.334; 0.367]	YES	-0.221	[-0.324; 0.334]	YES	-0.131	[-0.456; 0.432]	YES
Conscientiousness vs. Openness to Experience				Extraversion vs. Neuroticism			Extraversion vs. Openness to Experience		
	D = 0	95% CI	EMV?	D = 0	95% CI	EMV?	D = 0	95% CI	EMV?
SS	-0.331	[-0.390; 0.364]	NO	-0.211	[-0.344; 0.334]	NO	-0.345	[-0.390; 0.324]	NO
CV	-0.420	[-0.211; 0.311]	YES	-0.410	[-0.355; 0.322]	YES	-0.452	[-0.211; 0.351]	YES
PM	-0.452	[-0.241; 0.345]	YES	-0.341	[-0.245; 0.266]	YES	-0.411	[-0.242; 0.348]	YES
NV	-0.596	[-0.476; 0.463]	YES	-0.429	[-0.356; 0.387]	YES	-0.511	[-0.411; 0.422]	YES

PI	-0.431	[-0.234; 0.255]	YES	-0.210	[-0.145; 0.187]	YES	-0.412	[-0.299; 0.253]	YES
Neuroticism vs. Openness to Experience									
	D = 0	95% CI	EMV?						
SS	-0.399	[-0.332; 0.390]	NO						
CV	-0.413	[-0.366; 0.377]	YES						
PM	-0.411	[-0.320; 0.343]	YES						
NV	-0.512	[-0.441; 0.432]	YES						
PI	-0.356	[-0.398; 0.377]	YES						

*D=0: difference in the composite's mean value (=0); CI: confidence interval; EMV: equal Mean values.*

Table S3: Equal variance assessment.

Agreeableness vs. Conscientiousness				Agreeableness vs. Extraversion			Agreeableness vs. Neuroticism		
	R = 0	95% CI	EV?	R = 0	95% CI	EV?	R = 0	95% CI	EV?
SS	0.536	[-0.245; 0.256]	NO	0.387	[-0.245; 0.288]	NO	0.334	[-0.1895; 0.256]	NO
CV	0.373	[-0.423; 0.530]	YES	0.332	[-0.423; 0.554]	YES	0.346	[-0.523; 0.522]	YES
PM	0.156	[-0.345; 0.423]	YES	0.165	[-0.345; 0.488]	YES	0.367	[-0.451; 0.423]	YES
NV	0.235	[-0.377; 0.398]	YES	0.276	[-0.377; 0.486]	YES	0.145	[-0.345; 0.456]	YES
PI	0.165	[-0.345; 0.487]	YES	0.304	[-0.345; 0.423]	YES	0.276	[-0.256; 0.287]	YES
Agreeableness vs. Openness to Experience				Conscientiousness vs. Extraversion			Conscientiousness vs. Neuroticism		
	R = 0	95% CI	EV?	R = 0	95% CI	EV?	R = 0	95% CI	EV?
SS	0.366	[-0.173; 0.166]	NO	0.214	[-0.157; 0.162]	NO	0.134	[-0.244; 0.256]	NO
CV	0.254	[-0.377; 0.387]	YES	0.352	[-0.319; 0.331]	YES	0.263	[-0.356; 0.341]	YES
PM	0.187	[-0.366; 0.366]	YES	0.215	[-0.333; 0.311]	YES	0.235	[-0.342; 0.389]	YES
NV	0.288	[-0.305; 0.352]	YES	0.201	[-0.365; 0.364]	YES	0.400	[-0.433; 0.456]	YES
PI	0.241	[-0.334; 0.367]	YES	0.224	[-0.324; 0.334]	YES	0.131	[-0.456; 0.432]	YES
Conscientiousness vs. Openness to Experience				Extraversion vs. Neuroticism			Extraversion vs. Openness to Experience		
	R = 0	95% CI	EV?	R = 0	95% CI	EV?	R = 0	95% CI	EV?
SS	0.331	[-0.390; 0.364]	NO	0.233	[-0.344; 0.334]	NO	0.345	[-0.390; 0.324]	NO
CV	0.420	[-0.211; 0.311]	YES	0.234	[-0.155; 0.122]	YES	0.452	[-0.211; 0.351]	YES
PM	0.452	[-0.241; 0.345]	YES	0.341	[-0.245; 0.266]	YES	0.411	[-0.242; 0.348]	YES
NV	0.596	[-0.476; 0.463]	YES	0.429	[-0.356; 0.387]	YES	0.511	[-0.411; 0.422]	YES

PI	0.431	[-0.234; 0.255]	YES	0.210	[-0.145; 0.187]	YES	0.412	[-0.299; 0.253]	YES
Neuroticism vs. Openness to Experience									
	R = 0	95% CI	EV?						
SS	0.399	[-0.332; 0.390]	NO						
CV	0.413	[-0.366; 0.377]	YES						
PM	0.411	[-0.320; 0.343]	YES						
NV	0.512	[-0.441; 0.432]	YES						
PI	0.356	[-0.398; 0.377]	YES						

Notes: R=0: logarithm of the composite's variances ratio ( $R=0$ ); CI: confidence interval; EV: equal variances.