

Supplementary Material

Practical Challenges and Opportunities for Marine Plastic Litter Reduction in Manila: Structural Equation Modeling

Table S1. Demographic characteristics of respondents.

DEMOGRAPHICS VARIABLES	Sample Size (n = 426)	
	FREQUENCY	PERCENTAGE
Gender		
Male	152	35.7
Female	274	64.3
Age (Years)		
Over 55 Years Old	17	4.0
45–54	51	12.0
35–44	114	26.8
25–34	122	28.6
Under 25 Years Old	122	28.6
Educational Attainment		
Completed Graduate Studies	98	23.0
Completed Undergraduate Level	225	52.8
Completed Secondary Level	103	24.2
Income*		
Less Than 5,000 Pesos		
5,001–10,000 Pesos	45	10.6
10,001–15,000 Pesos	174	40.8
15,001–20,000 Pesos	82	19.2
20,001–25,000 Pesos	47	11.0
More Than 25,000 Pesos	24	5.6
Less Than 5,000 Pesos	54	12.7
Work Affiliation		
Barangay	395	92.7
Manila DPS	20	4.7
Enterprise/Private Sector	4	0.9
Association/NGO	1	0.2
Others (Academe, Junkshop)	6	1.4
Position of Work Affiliation		
Barangay Chairman	106	24.9
Barangay Secretary	267	62.7
Barangay Councilor	38	8.9
Technical Staff	5	1.2
Others	10	2.3
Years of Work		
Under 5 Years	241	56.6
6–10 Years	101	23.7
11–15 Years	42	9.9
16–20 Years	22	5.2
Over 20 Years	20	4.7

Exchange rate: 1 US\$ = 48 PhP (Pesos).

Table S2. Factors in MPL Reduction with mean, SD, Skewness, Kurtosis, factor loadings and Cronbach's Alpha.

Latent Factor & Manifest indicator	Mean	SD	Skewness	Kurtosis	Factor Loading	Eigen Value	Explained Variance, %	Cronbach's Alpha
MPLr	3.38	0.65				13.377	20.268	0.957
MPLsm5	3.48	0.607	−0.731	−0.433	0.29			
MPLsm3	3.46	0.640	−0.772	−0.434	0.819			
MPLsm9	3.42	0.613	−0.554	−0.603	0.816			
MPLsm13	3.32	0.678	−0.503	−0.781	0.811			
MPLsm4	3.48	0.595	−0.669	−0.507	0.803			
MPLsm16	3.48	0.626	−0.798	−0.372	0.792			
MPLsm2	3.34	0.653	−0.471	−0.711	0.759			
MPLsm14	3.43	0.648	−0.693	−0.542	0.742			
MPLsm10	3.46	0.628	−0.718	−0.473	0.739			
MPLsm6	3.26	0.672	−363	−0.808	0.736			
MPLsm12	3.27	0.692	−0.411	−0.877	0.717			
MPLsm1	3.27	0.651	−0.336	−0.728	0.709			
MPLsm11	3.33	0.702	−0.553	−0.844	0.653			
SE	3.60	0.53				7.270	11.015	0.879
SEb5	3.59	0.546	−0.890	−0.273	0.886			
SEb6	3.60	0.544	−0.945	−0.164	0.847			
SEb2	3.64	0.517	−1.005	−0.151	0.816			
SEb1	3.65	0.533	−1.183	0.390	0.792			
SEb3	3.59	0.521	−0.654	−0.915	0.741			

SEb4	3.53	0.540	-0.526	-0.916	0.599			
MPLe	3.30	0.64				5.882	8.913	0.885
MPLa5	3.19	0.662	-0.233	-0.759	0.851			
MPLa4	3.26	0.661	-0.337	-0.765	0.840			
MPLa2	3.26	0.621	-0.244	0.619	0.811			
MPLa1	3.37	0.615	-0.423	-0.658	0.763			
MPLa3	3.42	0.621	-0.592	-0.582	0.713			
CParty	3.57	0.57				3.100	4.697	0.913
CP4	3.48	0.610	-0.721	-0.447	0.879			
CP3	3.62	0.555	-1.087	0.183	0.864			
CP2	3.62	0.550	-1.072	0.140	0.851			
CP5	3.49	0.607	-0.767	-0.389	0.782			
CP1	3.65	0.543	-1.230	0.532	0.572			
EG	2.77	0.78				2.929	4.438	0.900
EGa3	2.70	0.770	-0.385	-0.096	0.861			
EGa1	2.73	0.842	-0.316	-0.428	0.859			
EGa2	2.87	0.787	-0.457	-0.038	0.805			
EGa3F1	2.70	0.770	-0.291	0.023	0.590			
EGa1l	2.86	0.714	-0.297	0.009	0.539			
EGcv	3.20	0.67				2.227	3.374	0.904
EGCV4	3.16	0.667	-0.194	-0.776	0.831			
EGCV5	3.26	0.647	-0.311	-0.714	0.815			
EGCV3	3.20	0.658	-0.237	-0.741	0.811			
EGCV1	3.17	0.693	-0.238	-0.912	0.786			
SEa	3.54	0.55				2.075	3.144	0.780
SEa7	3.49	0.545	-0.390	-0.992	0.809			
SEa6	3.54	0.526	-0.461	-1.150	0.768			
SEa3	3.64	0.532	-1.089	0.136	0.759			
SEa4	3.47	0.586	-0.585	-0.604	0.694			
WInfra	2.50	0.95				1.801	2.729	0.791
WI3	2.60	0.958	0.042	-0.994	0.840			
WI2	2.49	0.988	0.129	-1.018	0.829			
WI1	2.41	0.901	0.232	-0.704	0.778			
SEc	2.61	0.80				1.618	2.451	0.708
SEa1	2.78	0.773	-0.330	-0.153	0.867			
SEa2	2.44	0.819	0.042	-0.512	0.849			

Extraction Method: Principal Component Analysis. Total variance explained 68.022% for 13 factors. Bold magnitude are average means and average standard deviations.

Table S3. Results of Measurement Model (CFA) for the manifest and latent variables.

Manifest <--- Latent	β (8 factors)	β (9 factors)	S.E.	C.R.	P-value
MPLsm5 <--- MPLr	0.834	0.816			
MPLsm3 <--- MPLr	0.810	0.807	0.054	19.378	0.000
MPLsm9 <--- MPLr	0.826	0.827	0.051	20.057	0.000
MPLsm13 <--- MPLr	0.750	0.759	0.059	17.75	0.000
MPLsm4 <--- MPLr	0.816	0.796	0.042	22.546	0.000
MPLsm16 <--- MPLr	0.769	0.773	0.054	18.227	0.000
MPLsm2 <--- MPLr	0.720	0.719	0.057	16.532	0.000
MPLsm14 <--- MPLr	0.724	0.717	0.057	16.459	0.000
MPLsm6 <--- MPLr	0.712	0.679	0.06	15.337	0.000
MPLsm10 <--- MPLr	0.674	0.727	0.055	16.775	0.000
MPLsm12 <--- MPLr	0.646	0.653	0.063	14.565	0.000
MPLsm1 <--- MPLr	0.675	0.678	0.058	15.302	0.000
SEb5 <--- SE	0.849	0.848			
SEb6 <--- SE	0.815	0.816	0.05	19.134	0.000
SEb2 <--- SE	0.703	0.704	0.05	15.699	0.000
SEb1 <--- SE	0.682	0.683	0.052	15.081	0.000
SEb3 <--- SE	0.705	0.705	0.05	15.796	0.000
SEb4 <--- SE	0.631	0.631	0.054	13.701	0.000
MPLa5 <--- MPLe	0.684	0.658			
MPLa4 <--- MPLe	0.753	0.720	0.059	18.588	0.000
MPLa2 <--- MPLe	0.757	0.820	0.085	13.72	0.000
MPLa1 <--- MPLe	0.737	0.803	0.084	13.536	0.000
MPLa3 <--- MPLe	0.765	0.734	0.083	12.675	0.000
CP4 <--- CParty	0.797	0.796			
CP3 <--- CParty	0.871	0.870	0.051	19.486	0.000
CP2 <--- CParty	0.830	0.830	0.051	18.506	0.000
CP5 <--- CParty	0.710	0.710	0.058	15.31	0.000
CP1 <--- CParty	0.514	0.514	0.054	10.55	0.000
EGCV4 <--- EGcv	0.766	0.766			
EGCV5 <--- EGcv	0.732	0.731	0.065	14.318	0.000
EGCV3 <--- EGcv	0.791	0.792	0.066	15.375	0.000
EGCV1 <--- EGcv	0.698	0.698	0.069	13.662	0.000

EGa3	<---	EG	0.763	0.763			
EGa1	<---	EG	0.746	0.746	0.077	13.891	0.000
EGa2	<---	EG	0.706	0.706	0.071	13.252	0.000
EGa11	<---	EG	0.658	0.658	0.064	12.403	0.000
WI2	<---	WInfras	0.769	0.752			
WI3	<---	WInfras	0.752	0.769	0.088	11.242	0.000
WI1	<---	WInfras	0.655	0.655	0.072	10.966	0.000
SEa7	<---	SEas	0.751	0.750			
SEa6	<---	SEas	0.684	0.683	0.076	11.576	0.000
SEa4	<---	SEas	0.702	0.703	0.086	11.772	0.000

From EFA, 9 latent factors reduced to 8 latent factors.