

LAMPIRAN 3

Uji Validitas X1 (Motivasi)

No. Resp	ITEM INSTRUMEN X1															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Jumlah
1	4	5	4	5	5	5	5	5	5	5	5	4	4	5	5	71
2	4	3	2	3	5	4	4	4	4	4	4	3	4	4	4	56
3	5	3	3	4	4	4	4	4	4	4	4	4	4	5	5	61
4	4	4	3	4	4	4	4	4	4	5	5	4	4	4	5	62
5	3	2	2	3	3	3	3	3	4	3	4	2	3	4	4	46
6	3	4	4	4	4	4	4	4	4	3	3	2	3	3	2	51
7	4	3	3	3	4	4	4	4	4	4	4	2	4	4	3	54
8	4	3	3	4	3	3	2	2	3	3	3	2	3	3	3	44
9	5	4	5	5	4	5	5	5	4	4	4	3	4	4	5	66
10	5	3	3	5	4	5	5	4	4	4	4	4	5	4	4	63
11	5	3	3	5	4	5	4	5	4	4	4	5	4	4	5	64
12	4	2	3	3	4	4	4	4	4	4	2	3	3	4	4	52
13	3	4	4	2	4	4	2	4	3	2	2	2	2	3	4	45
14	3	3	2	4	4	4	3	4	4	4	4	2	4	4	4	53
15	2	2	2	4	4	4	4	4	4	5	4	4	4	2	5	54
16	5	3	3	5	5	5	4	4	4	4	5	4	4	4	4	63
17	4	2	2	4	2	4	4	4	4	4	4	3	4	4	4	53
18	4	3	3	4	4	4	4	4	5	4	4	4	5	5	5	62
19	4	3	3	5	4	5	4	4	4	5	4	4	5	5	2	61
20	4	3	4	5	5	5	5	5	5	5	5	3	5	5	4	68
Jumlah	79	62	61	81	80	85	78	81	81	80	78	64	78	80	81	1149
r hitung	0,587	0,573	0,393	0,774	0,583	0,842	0,848	0,771	0,729	0,730	0,720	0,733	0,744	0,644	0,438	
r tabel	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	
ket.	V	V	D	V	V	V	V	V	V	V	V	V	V	V	D	

$\Sigma XY 1$	$\Sigma XY 2$	$\Sigma XY 3$	$\Sigma XY 4$	$\Sigma XY 5$	$\Sigma XY 6$	$\Sigma XY 7$	$\Sigma XY 8$	$\Sigma XY 9$	$\Sigma XY 10$	$\Sigma XY 11$	$\Sigma XY 12$	$\Sigma XY 13$	$\Sigma XY 14$	$\Sigma XY 15$
16	25	16	25	25	25	25	25	25	25	25	16	16	25	25
16	9	4	9	25	16	16	16	16	16	16	9	16	16	16
25	9	9	16	16	16	16	16	16	16	16	16	16	25	25
16	16	9	16	16	16	16	16	16	25	25	16	16	16	25
9	4	4	9	9	9	9	9	16	9	16	4	9	16	16
9	16	16	16	16	16	16	16	16	9	9	4	9	9	4
16	9	9	9	16	16	16	16	16	16	16	4	16	16	9
16	9	9	16	9	9	4	4	9	9	9	4	9	9	9
25	16	25	25	16	25	25	25	16	16	16	9	16	16	25
25	9	9	25	16	25	25	16	16	16	16	16	25	16	16
25	9	9	25	16	25	16	25	16	16	16	25	16	16	25
16	4	9	9	16	16	16	16	16	16	4	9	9	16	16
9	16	16	4	16	16	4	16	9	4	4	4	4	9	16
9	9	4	16	16	16	9	16	16	16	16	4	16	16	16
4	4	4	16	16	16	16	16	16	25	16	16	16	4	25
25	9	9	25	25	25	16	16	16	16	25	16	16	16	16
16	4	4	16	4	16	16	16	16	16	16	9	16	16	16
16	9	9	16	16	16	16	16	25	16	16	16	25	25	25
16	9	9	25	16	25	16	16	16	25	16	16	25	25	4
16	9	16	25	25	25	25	25	25	25	25	9	25	25	16
325	204	199	343	330	369	318	337	333	332	318	222	316	332	345

ΣX_1^2	ΣX_2^2	ΣX_3^2	ΣX_4^2	ΣX_5^2	ΣX_6^2	ΣX_7^2	ΣX_8^2	ΣX_9^2	ΣX_{10}^2	ΣX_{11}^2	ΣX_{12}^2	ΣX_{13}^2	ΣX_{14}^2	ΣX_{15}^2	Y^2
284	355	284	355	355	355	355	355	355	355	355	284	284	355	355	5041
224	168	112	168	280	224	224	224	224	224	224	168	224	224	224	3136
305	183	183	244	244	244	244	244	244	244	244	244	244	305	305	3721
248	248	186	248	248	248	248	248	248	310	310	248	248	248	310	3844
138	92	92	138	138	138	138	138	184	138	184	92	138	184	184	2116
153	204	204	204	204	204	204	204	204	153	153	102	153	153	102	2601
216	162	162	162	216	216	216	216	216	216	216	108	216	216	162	2916
176	132	132	176	132	132	88	88	132	132	132	88	132	132	132	1936
330	264	330	330	264	330	330	330	264	264	264	198	264	264	330	4356
315	189	189	315	252	315	315	252	252	252	252	252	315	252	252	3969
320	192	192	320	256	320	256	320	256	256	256	320	256	256	320	4096
208	104	156	156	208	208	208	208	208	208	104	156	156	208	208	2704
135	180	180	90	180	180	90	180	135	90	90	90	90	135	180	2025
159	159	106	212	212	212	159	212	212	212	212	106	212	212	212	2809
108	108	108	216	216	216	216	216	216	270	216	216	216	108	270	2916
315	189	189	315	315	315	252	252	252	252	315	252	252	252	252	3969
212	106	106	212	106	212	212	212	212	212	212	159	212	212	212	2809
248	186	186	248	248	248	248	248	310	248	248	248	310	310	310	3844
244	183	183	305	244	305	244	244	244	305	244	244	305	305	122	3721
272	204	272	340	340	340	340	340	340	340	340	204	340	340	272	4624
4610	3608	3552	4754	4658	4962	4587	4731	4708	4681	4571	3779	4567	4671	4714	67153

Lampiran 3

Uji Validitas Variabel X₁

Pengujian validitas dilakukan menggunakan rumus Korelasi Pearson

$$r_{xy} = \frac{N \cdot \sum XY - \sum X \sum Y}{\sqrt{[N \cdot \sum X^2 - (\sum X)^2][N \cdot \sum Y^2 - (\sum Y)^2]}}$$

$$r_{xy} = \frac{20(4610) - (79)(1149)}{\sqrt{((20(325) - (79)^2)(20(67153) - (1149)^2))}}$$

$$r_{xy} = \frac{92200 - 90771}{\sqrt{(259)(22589)}} = \frac{1429}{2433,20} = 0,587$$

$$r_{xy} = \frac{20(3608) - (62)(1149)}{\sqrt{((20(204) - (62)^2)(20(67153) - (1149)^2))}}$$

$$r_{xy} = \frac{72160 - 71238}{\sqrt{(236)(22589)}} = \frac{1324}{2308,87} = 0,573$$

$$r_{xy} = \frac{20(3552) - (61)(1149)}{\sqrt{((20(199) - (61)^2)(20(67153) - (1149)^2))}}$$

$$r_{xy} = \frac{71040 - 70089}{\sqrt{(259)(22589)}} = \frac{951}{2418,79} = 0,393$$

$$r_{xy} = \frac{20(4754) - (81)(1149)}{\sqrt{((20(343) - (81)^2)(20(67153) - (1149)^2))}}$$

$$r_{xy} = \frac{95080 - 93069}{\sqrt{(299)(22589)}} = \frac{2011}{2598,87} = 0,774$$

$$r_{xy} = \frac{20(4658) - (80)(1149)}{\sqrt{((20(330) - (80)^2)(20(67153) - (1149)^2))}}$$

$$r_{xy} = \frac{93160 - 91920}{\sqrt{(200)(22589)}} = \frac{1240}{2125,51} = 0,583$$

$$r_{xy} = \frac{20(4962) - (85)(1149)}{\sqrt{((20(369) - (85)^2)(20(67153) - (1149)^2))}}$$

$$r_{xy} = \frac{99240 - 97665}{\sqrt{(155)(22589)}} = \frac{1575}{1871,17} = 0,842$$

$$r_{xy} = \frac{20(4587) - (78)(1149)}{\sqrt{((20(318) - (78)^2)(20(67153) - (1149)^2))}}$$

$$r_{xy} = \frac{91740 - 89622}{\sqrt{(276)(22589)}} = \frac{2118}{2496,91} = 0,848$$

$$r_{xy} = \frac{20(4731) - (81)(1149)}{\sqrt{((20(337) - (81)^2)(20(67153) - (1149)^2))}}$$

$$r_{xy} = \frac{94620 - 93069}{\sqrt{(179)(22589)}} = \frac{1551}{2010,83} = 0,771$$

$$r_{xy} = \frac{20(4708) - (81)(1149)}{\sqrt{((20(333) - (81)^2)(20(67153) - (1149)^2))}}$$

$$r_{xy} = \frac{94160 - 93069}{\sqrt{(99)(22589)}} = \frac{1091}{1495,43} = 0,729$$

$$r_{xy} = \frac{20(4681) - (80)(1149)}{\sqrt{((20(332) - (80)^2)(20(67153) - (1149)^2))}}$$

$$r_{xy} = \frac{93620 - 91920}{\sqrt{(240)(22589)}} = \frac{1700}{2328,38} = 0,730$$

$$r_{xy} = \frac{20(4571)-(78)(1149)}{\sqrt{((20(318)-(78)^2(20(67153)-(1149)^2))}}$$

$$r_{xy} = \frac{91420-89622}{\sqrt{(276)(22589)}} = \frac{1798}{2496,91} = 0,720$$

$$r_{xy} = \frac{20(3779)-(64)(1149)}{\sqrt{((20(222)-(64)^2(20(67153)-(1149)^2))}}$$

$$r_{xy} = \frac{75580-73536}{\sqrt{(344)(22589)}} = \frac{2044}{2787,58} = 0,733$$

$$r_{xy} = \frac{20(4567)-(78)(1149)}{\sqrt{((20(316)-(78)^2(20(67153)-(1149)^2))}}$$

$$r_{xy} = \frac{91340-89622}{\sqrt{(236)(22589)}} = \frac{1718}{2308,90} = 0,744$$

$$r_{xy} = \frac{20(4671)-(80)(1149)}{\sqrt{((20(332)-(80)^2(20(67153)-(1149)^2))}}$$

$$r_{xy} = \frac{93420-91920}{\sqrt{(240)(22589)}} = \frac{1500}{2328,38} = 0,644$$

$$r_{xy} = \frac{20(4714)-(81)(1149)}{\sqrt{((20(345)-(81)^2(20(67153)-(1149)^2))}}$$

$$r_{xy} = \frac{94280-93069}{\sqrt{(339)(22589)}} = \frac{1211}{2767,25} = 0,438$$

Dari hasil perhitungan seluruh item ditampilkan pada tabel berikut

No Item	r hitung	r tabel	Ket
1	0,587	0,444	Valid
2	0,573	0,444	Valid
3	0,393	0,444	Tidak Valid
4	0,774	0,444	Valid
5	0,583	0,444	Valid
6	0,842	0,444	Valid
7	0,848	0,444	Valid
8	0,771	0,444	Valid
9	0,729	0,444	Valid
10	0,730	0,444	Valid
11	0,720	0,444	Valid
12	0,733	0,444	Valid
13	0,744	0,444	Valid
14	0,644	0,444	Valid
15	0,438	0,444	Tidak Valid

Dari hasil perhitungan seperti tercantum pada tabel diatas maka terdapat 2 item pernyataan pada variabel X_1 yang dinyatakan tidak valid dan harus dikeluarkan dari instrument.

Uji Reliabilitas Variabel X₁

Uji reliabilitas instrument dengan alpha cronbach, terlebih dahulu menghitung varians masing masing butir dengan rumus berikut,

$$\sigma_1^2 = \frac{\sum X^2 - \frac{(\sum X)^2}{n}}{n-1}$$

$$\sigma_1^2 = \frac{325 - \frac{(79)^2}{20}}{19} = 0,681$$

$$\sigma_1^2 = \frac{204 - \frac{(62)^2}{20}}{19} = 0,621$$

$$\sigma_1^2 = \frac{199 - \frac{(61)^2}{20}}{19} = 0,681$$

$$\sigma_1^2 = \frac{343 - \frac{(81)^2}{20}}{19} = 0,787$$

$$\sigma_1^2 = \frac{330 - \frac{(80)^2}{20}}{19} = 0,526$$

$$\sigma_1^2 = \frac{369 - \frac{(85)^2}{20}}{19} = 0,394$$

$$\sigma_1^2 = \frac{318 - \frac{(78)^2}{20}}{19} = 0,726$$

$$\sigma_1^2 = \frac{337 - \frac{(81)^2}{20}}{19} = 0,471$$

$$\sigma_1^2 = \frac{333 - \frac{(81)^2}{20}}{19} = 0,260$$

$$\sigma_1^2 = \frac{332 - \frac{(80)^2}{20}}{19} = 0,631$$

$$\sigma_1^2 = \frac{318 - \frac{(78)^2}{20}}{19} = 0,726$$

$$\sigma_1^2 = \frac{222 - \frac{(64)^2}{20}}{19} = 0,905$$

$$\sigma_1^2 = \frac{316 - \frac{(78)^2}{20}}{19} = 0,621$$

$$\sigma_1^2 = \frac{332 - \frac{(80)^2}{20}}{19} = 1,631$$

$$\sigma_1^2 = \frac{345 - \frac{(81)^2}{20}}{19} = 0,892$$

Dari hasil perhitungan varians seluruh item ditampilkan pada tabel berikut

No item	σ_1^2
1	0,681
2	0,621
3	0,681
4	0,787
5	0,526
6	0,394
7	0,726

8	0,471
9	0,260
10	0,631
11	0,726
12	0,905
13	0,621
14	1,631
15	0,892
$\sum s_i^2$	10,553

Menghitung varians total item sebagai berikut

$$\sigma_1^2 = \frac{67153 - \frac{(1149)^2}{20}}{19} = 60,155$$

Menghitung nilai Alpha Cronbach dengan rumus

$$r_{11} = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum s_i^2}{s^2} \right)$$

$$r_{11} = \left(\frac{20}{19} \right) \left(1 - \frac{10,553}{60,155} \right)$$

$$r_{11} = (1,053)(0,825)$$

$$r_{11} = 0,869 \text{ (reliabilitasnya sangat tinggi)}$$