**Lampiran 02**

**HASIL PENGUJIAN VALIDITAS VARIABEL X SECARA MANUAL DENGAN MENGGUNAKAN RUMUS *PRODUCT MOMENT***



1. $r\_{x\_{1}y}= \frac{30 \left(4153\right)-\left(109\right)\left(1116\right)}{\sqrt{\{30 \left(419\right)-\left(109)^{2}\right\}\{30 \left(42334\right)- (1116)^{2}\}}} =\frac{124590-121644}{\sqrt{\left(12570-11881\right)(1270020-1245456)}}$

$=\frac{2946}{\sqrt{\left(689\right)(24564)}}$ = $\frac{2946}{\sqrt{16924596}}$ =$\frac{2946}{4113,951385}$ = 0,716099857

1. $r\_{x\_{1}y}= \frac{30 \left(4722\right)-\left(124\right)\left(1116\right)}{\sqrt{\{30 \left(538\right)-\left(124)^{2}\right\}\{30 \left(42334\right)- (1116)^{2}\}}} =\frac{141660-138384}{\sqrt{\left(16140-15376\right)(1270020-1245456)}}$

$=\frac{3276}{\sqrt{\left(764\right)(24564)}}$ = $\frac{3276}{\sqrt{18766896}}$ =$\frac{3276}{4332,077562}$ = 0,756219147

1. $r\_{x\_{1}y}= \frac{30 \left(4167\right)-\left(110\right)\left(1116\right)}{\sqrt{\{30 \left(422\right)-\left(110)^{2}\right\}\{30 \left(42334\right)- (1116)^{2}\}}}=\frac{125010-122760}{\sqrt{\left(12660-12100\right)(1270020-1245456)}}$

$=\frac{2250}{\sqrt{\left(560\right)(24564)}}$ = $\frac{2250}{\sqrt{13755840}}$ =$\frac{2250}{3708,886625}$ = 0,606651059

1. $r\_{x\_{1}y}= \frac{30 \left(4388\right)-\left(116\right)\left(1116\right)}{\sqrt{\{30 \left(468\right)-\left(116)^{2}\right\}\{30 \left(42334\right)- (1116)^{2}\}}}=\frac{131640-129456}{\sqrt{\left(14040-13456\right)(1270020-1245456)}}$

$=\frac{2184}{\sqrt{\left(584\right)(24564)}}$ = $\frac{2184}{\sqrt{14345376}}$ =$\frac{2184}{3787,52901}$ = 0,576629246

1. $r\_{x\_{1}y}= \frac{30 \left(4096\right)-\left(108\right)\left(1116\right)}{\sqrt{\{30 \left(406\right)-\left(108)^{2}\right\}\{30 \left(42334\right)- (1116)^{2}\}}} =\frac{122880-120528}{\sqrt{\left(12180-11664\right)(1270020-1245456)}}$

$=\frac{2352}{\sqrt{\left(516\right)(24564)}}$ = $\frac{2352}{\sqrt{12675024}}$ =$\frac{2352}{3560,199994}$ = 0,660637044

1. $r\_{x\_{1}y}= \frac{30 \left(3926\right)-\left(104\right)\left(1116\right)}{\sqrt{\{30 \left(378\right)-\left(104)^{2}\right\}\{30 \left(42334\right)- (1116)^{2}\}}}=\frac{117780-116064}{\sqrt{\left(11340-10816\right)(1270020-1245456)}}$

$=\frac{1716}{\sqrt{\left(524\right)(24564)}}$ = $\frac{1716}{\sqrt{12871536}}$ =$\frac{1716}{3587,692295}$ = 0,478301888

1. $r\_{x\_{1}y}= \frac{30 \left(4539\right)-\left(120\right)\left(1116\right)}{\sqrt{\{30 \left(496\right)-\left(120)^{2}\right\}\{30 \left(42334\right)- (1116)^{2}\}}}=\frac{136170-133920}{\sqrt{\left(14880-14400\right)(1270020-1245456)}}$

$=\frac{2250}{\sqrt{\left(480\right)(24564)}}$ = $\frac{2250}{\sqrt{11790720}}$ =$\frac{2250}{3433,761786}$ = 0,655258034

1. $r\_{x\_{1}y}= \frac{30 \left(3982\right)-\left(105\right)\left(1116\right)}{\sqrt{\{30 \left(395\right)-\left(105)^{2}\right\}\{30 \left(42334\right)- (1116)^{2}\}}}=\frac{119460-117180}{\sqrt{\left(11850-11025\right)(1270020-1245456)}}$

$=\frac{2280}{\sqrt{\left(825\right)(24564)}}$ = $\frac{2280}{\sqrt{20265300}}$ =$\frac{2280}{4501,699679}$ = 0,506475367

1. $r\_{x\_{1}y}= \frac{30 \left(4167\right)-\left(110\right)\left(1116\right)}{\sqrt{\{30 \left(422\right)-\left(110)^{2}\right\}\{30 \left(42334\right)- (1116)^{2}\}}}=\frac{125010-122760}{\sqrt{\left(12660-12100\right)(1270020-1245456)}}$

$=\frac{2250}{\sqrt{\left(560\right)(24564)}}$ = $\frac{2250}{\sqrt{13755840}}$ =$\frac{2250}{3708,886625}$ = 0,606651059

1. $r\_{x\_{1}y}= \frac{30 \left(4194\right)-\left(110\right)\left(1116\right)}{\sqrt{\{30 \left(426\right)-\left(110)^{2}\right\}\{30 \left(42334\right)- (1116)^{2}\}}}=\frac{125820-122760}{\sqrt{\left(12780-12100\right)(1270020-1245456)}}$

$=\frac{3060}{\sqrt{\left(680\right)(24564)}}$ = $\frac{3060}{\sqrt{16703520}}$ =$\frac{3060}{4086,994005}$ = 0,748716537

**HASIL PENGUJIAN VALIDITAS VARIABEL Y SECARA MANUAL DENGAN MENGGUNAKAN RUMUS *PRODUCT MOMENT***

1. $r\_{x\_{1}y}= \frac{30 \left(4216\right)-\left(114\right)\left(1076\right)}{\sqrt{\{30 \left(460\right)-\left(114)^{2}\right\}\{30 \left(39714\right)- (1076)^{2}\}}} =\frac{126480-122664}{\sqrt{\left(13800-12996\right)(1191420-1157776)}}$

$=\frac{3816}{\sqrt{\left(804\right)(33644)}}$ = $\frac{3816}{\sqrt{27049776}}$ =$\frac{3816}{5200,939915}$ = 0,733713533

1. $r\_{x\_{1}y}= \frac{30 \left(3209\right)-\left(87\right)\left(1076\right)}{\sqrt{\{30 \left(279\right)-\left(87)^{2}\right\}\{30 \left(39714\right)- (1076)^{2}\}}} =\frac{96270-93612}{\sqrt{\left(8370-7569\right)(1191420-1157776)}}$

$=\frac{2658}{\sqrt{\left(801\right)(33644)}}$ = $\frac{2658}{\sqrt{26948844}}$ =$\frac{2658}{5191,2276}$ = 0,512017619

1. $r\_{x\_{1}y}= \frac{30 \left(4162\right)-\left(114\right)\left(1076\right)}{\sqrt{\{30 \left(454\right)-\left(114)^{2}\right\}\{30 \left(39714\right)- (1076)^{2}\}}}=\frac{124860-122664}{\sqrt{\left(13620-12996\right)(1191420-1157776)}}$

$=\frac{2196}{\sqrt{\left(624\right)(33644)}}$ = $\frac{2196}{\sqrt{20993856}}$ =$\frac{2196}{4581,905281}$ = 0,479276603

1. $r\_{x\_{1}y}= \frac{30 \left(3707\right)-\left(101\right)\left(1076\right)}{\sqrt{\{30 \left(353\right)-\left(101)^{2}\right\}\{30 \left(39714\right)- (1076)^{2}\}}}=\frac{111210-108676}{\sqrt{\left(10590-10201\right)(1191420-1157776)}}$

$=\frac{2534}{\sqrt{\left(389\right)(33644)}}$ = $\frac{2534}{\sqrt{13087516}}$ =$\frac{2534}{3617,667204}$ = 0,700451384

1. $r\_{x\_{1}y}= \frac{30 \left(4172\right)-\left(112\right)\left(1076\right)}{\sqrt{\{30 \left(450\right)-\left(112)^{2}\right\}\{30 \left(39714\right)- (1076)^{2}\}}} =\frac{125160-120512}{\sqrt{\left(13500-12544\right)(1191420-1157776)}}$

$=\frac{4648}{\sqrt{\left(956\right)(33644)}}$ = $\frac{4648}{\sqrt{32163664}}$ =$\frac{4648}{5671,301791}$ = 0,81956492

1. $r\_{x\_{1}y}= \frac{30 \left(4218\right)-\left(113\right)\left(1076\right)}{\sqrt{\{30 \left(461\right)-\left(113)^{2}\right\}\{30 \left(39714\right)- (1076)^{2}\}}}=\frac{126540-121588}{\sqrt{\left(13830-12769\right)(1191420-1157776)}}$

$=\frac{4952}{\sqrt{\left(1061\right)(33644)}}$ = $\frac{4952}{\sqrt{35696284}}$ =$\frac{4952}{5974,636725}$ = 0,828837003

1. $r\_{x\_{1}y}= \frac{30 \left(4346\right)-\left(117\right)\left(1076\right)}{\sqrt{\{30 \left(487\right)-\left(117)^{2}\right\}\{30 \left(39714\right)- (1076)^{2}\}}}=\frac{130380-125892}{\sqrt{\left(14610-13689\right)(1191420-1157776)}}$

$=\frac{4488}{\sqrt{\left(921\right)(33644)}}$ = $\frac{4488}{\sqrt{30986124}}$ =$\frac{4488}{5566,518122}$ = 0,806249059

1. $r\_{x\_{1}y}= \frac{30 \left(3976\right)-\left(107\right)\left(1076\right)}{\sqrt{\{30 \left(411\right)-\left(107)^{2}\right\}\{30 \left(49714\right)- (1076)^{2}\}}}=\frac{119280-115132}{\sqrt{\left(12330-11449\right)(1191420-1157776)}}$

$=\frac{4148}{\sqrt{\left(881\right)(33644)}}$ = $\frac{4148}{\sqrt{29640364}}$ =$\frac{4148}{5444,296465}$ = 0,761898259

1. $r\_{x\_{1}y}= \frac{30 \left(3879\right)-\left(106\right)\left(1076\right)}{\sqrt{\{30 \left(394\right)-\left(106)^{2}\right\}\{30 \left(39714\right)- (1076)^{2}\}}}=\frac{116370-114056}{\sqrt{\left(11820-11236\right)(1191420-1157776)}}$

$=\frac{2314}{\sqrt{\left(584\right)(33644)}}$ = $\frac{2314}{\sqrt{19648096}}$ =$\frac{2314}{4432,617286}$ = 0,522039204

1. $r\_{x\_{1}y}= \frac{30 \left(3829\right)-\left(105\right)\left(1076\right)}{\sqrt{\{30 \left(377\right)-\left(105)^{2}\right\}\{30 \left(39714\right)- (1076)^{2}\}}}=\frac{114870-112980}{\sqrt{\left(11310-11025\right)(1191420-1157776)}}$

$=\frac{1890}{\sqrt{\left(285\right)(33644)}}$ = $\frac{1890}{\sqrt{9588540}}$ =$\frac{1890}{3096,536775}$ = 0,610359294