

## Lampiran 9

### Hitungan Uji Coba Validitas Variabel X<sub>2</sub>

Butir soal 1

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$
$$r_{xy} = \frac{12 \cdot 1353 - 27 \cdot 593}{\sqrt{\{12 \cdot 63 - (27)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$
$$r_{xy} = \frac{16236 - 16011}{\sqrt{\{756 - 729\} \cdot \{362400 - 351649\}}}$$
$$r_{xy} = \frac{225}{\sqrt{27 \cdot 10751}}$$
$$r_{xy} = \frac{225}{\sqrt{290277}} = \frac{225}{538,773} = 0,417$$

Butir soal 2

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$
$$r_{xy} = \frac{12 \cdot 1295 - 25 \cdot 593}{\sqrt{\{12 \cdot 59 - (25)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$
$$r_{xy} = \frac{15540 - 14825}{\sqrt{\{708 - 625\} \cdot \{362400 - 351649\}}}$$
$$r_{xy} = \frac{715}{\sqrt{83 \cdot 10751}}$$
$$r_{xy} = \frac{715}{\sqrt{892333}} = \frac{715}{944,633} = 0,756$$

Butir soal 3

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$
$$r_{xy} = \frac{12 \cdot 1125 - 22 \cdot 593}{\sqrt{\{12 \cdot 44 - (22)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$
$$r_{xy} = \frac{13500 - 13046}{\sqrt{\{528 - 484\} \cdot \{362400 - 351649\}}}$$
$$r_{xy} = \frac{454}{\sqrt{44 \cdot 10751}}$$
$$r_{xy} = \frac{454}{\sqrt{473044}} = \frac{454}{687,781} = 0,66$$

Butir soal 4

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$
$$r_{xy} = \frac{12 \cdot 1029 - 20 \cdot 593}{\sqrt{\{12 \cdot 36 - (20)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$
$$r_{xy} = \frac{12348 - 11860}{\sqrt{\{432 - 400\} \cdot \{362400 - 351649\}}}$$
$$r_{xy} = \frac{488}{\sqrt{32 \cdot 10751}}$$
$$r_{xy} = \frac{488}{\sqrt{344032}} = \frac{488}{583,542} = 0,831$$

Butir soal 5

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$
$$r_{xy} = \frac{12 \cdot 1567 - 31 \cdot 593}{\sqrt{\{12 \cdot 83 - (31)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$
$$r_{xy} = \frac{18804 - 18383}{\sqrt{\{996 - 961\} \cdot \{362400 - 351649\}}}$$
$$r_{xy} = \frac{421}{\sqrt{35 \cdot 10751}}$$
$$r_{xy} = \frac{421}{\sqrt{376285}} = \frac{421}{613,42} = 0,686$$

Butir soal 6

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$
$$r_{xy} = \frac{12 \cdot 1122 - 22 \cdot 593}{\sqrt{\{12 \cdot 42 - (22)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$
$$r_{xy} = \frac{13464 - 13046}{\sqrt{\{504 - 484\} \cdot \{362400 - 351649\}}}$$
$$r_{xy} = \frac{418}{\sqrt{20 \cdot 10751}}$$
$$r_{xy} = \frac{418}{\sqrt{215020}} = \frac{418}{463,702} = 0,901$$

Butir soal 7

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1122 - 22 \cdot 593}{\sqrt{\{12 \cdot 42 - (22)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{13464 - 13046}{\sqrt{\{504 - 484\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{418}{\sqrt{20 \cdot 10751}}$$

$$r_{xy} = \frac{418}{\sqrt{215020}} = \frac{418}{463,702} = 0,901$$

Butir soal 8

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1240 - 24 \cdot 593}{\sqrt{\{12 \cdot 54 - (24)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{14880 - 14232}{\sqrt{\{648 - 576\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{648}{\sqrt{72 \cdot 10751}}$$

$$r_{xy} = \frac{648}{\sqrt{774072}} = \frac{648}{879,813} = 0,736$$

Butir soal 9

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1177 - 23 \cdot 593}{\sqrt{\{12 \cdot 47 - (23)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{14124 - 13639}{\sqrt{\{564 - 529\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{485}{\sqrt{35 \cdot 10751}}$$

$$r_{xy} = \frac{485}{\sqrt{376285}} = \frac{485}{613,42} = 0,79$$

Butir soal 10

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1267 - 25 \cdot 593}{\sqrt{\{12 \cdot 56 - (25)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{15204 - 14825}{\sqrt{\{672 - 625\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{379}{\sqrt{47 \cdot 10751}}$$

$$r_{xy} = \frac{379}{\sqrt{505297}} = \frac{379}{710,842} = 0,533$$

Butir soal 11

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1377 - 27 \cdot 593}{\sqrt{\{12 \cdot 65 - (27)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{16524 - 16011}{\sqrt{\{780 - 729\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{513}{\sqrt{51 \cdot 10751}}$$

$$r_{xy} = \frac{513}{\sqrt{548301}} = \frac{513}{740,473} = 0,692$$

Butir soal 12

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1405 - 27 \cdot 593}{\sqrt{\{12 \cdot 69 - (27)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{16860 - 16011}{\sqrt{\{828 - 729\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{849}{\sqrt{99 \cdot 10751}}$$

$$r_{xy} = \frac{849}{\sqrt{1064349}} = \frac{849}{1031,672} = 0,823$$

Butir soal 13

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1672 - 33 \cdot 593}{\sqrt{\{12 \cdot 93 - (33)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{20064 - 19569}{\sqrt{\{1116 - 1089\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{495}{\sqrt{27 \cdot 10751}}$$

$$r_{xy} = \frac{495}{\sqrt{290277}} = \frac{495}{538,773} = 0,918$$

Butir soal 14

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1662 - 33 \cdot 593}{\sqrt{\{12 \cdot 93 - (33)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{19944 - 19569}{\sqrt{\{1116 - 1089\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{375}{\sqrt{27 \cdot 10751}}$$

$$r_{xy} = \frac{375}{\sqrt{290277}} = \frac{375}{538,773} = 0,696$$

Butir soal 15

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1078 - 21 \cdot 593}{\sqrt{\{12 \cdot 39 - (21)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{12936 - 12453}{\sqrt{\{468 - 441\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{483}{\sqrt{27 \cdot 10751}}$$

$$r_{xy} = \frac{483}{\sqrt{290277}} = \frac{483}{538,773} = 0,896$$

Butir soal 16

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1684 - 33 \cdot 593}{\sqrt{\{12 \cdot 95 - (33)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{20208 - 19569}{\sqrt{\{1140 - 1089\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{639}{\sqrt{51 \cdot 10751}}$$

$$r_{xy} = \frac{639}{\sqrt{548301}} = \frac{639}{740,473} = 0,862$$

Butir soal 17

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1750 - 35 \cdot 593}{\sqrt{\{12 \cdot 103 - (35)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{21000 - 20755}{\sqrt{\{1236 - 1225\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{245}{\sqrt{11 \cdot 10751}}$$

$$r_{xy} = \frac{245}{\sqrt{118261}} = \frac{245}{343,89} = 0,712$$

Butir soal 18

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_{xy} = \frac{12 \cdot 1627 - 32 \cdot 593}{\sqrt{\{12 \cdot 90 - (32)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$

$$r_{xy} = \frac{19524 - 18976}{\sqrt{\{1080 - 1024\} \cdot \{362400 - 351649\}}}$$

$$r_{xy} = \frac{548}{\sqrt{56 \cdot 10751}}$$

$$r_{xy} = \frac{548}{\sqrt{602056}} = \frac{548}{775,922} = 0,706$$

Butir soal 19

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$
$$r_{xy} = \frac{12 \cdot 1684 - 33 \cdot 593}{\sqrt{\{12 \cdot 95 - (33)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$
$$r_{xy} = \frac{20208 - 19569}{\sqrt{\{1140 - 1089\} \cdot \{362400 - 351649\}}}$$
$$r_{xy} = \frac{639}{\sqrt{51 \cdot 10751}}$$
$$r_{xy} = \frac{639}{\sqrt{548301}} = \frac{639}{740,473} = 0,862$$

Butir soal 20

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$
$$r_{xy} = \frac{12 \cdot 1189 - 23 \cdot 593}{\sqrt{\{12 \cdot 49 - (23)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$
$$r_{xy} = \frac{14268 - 13639}{\sqrt{\{588 - 529\} \cdot \{362400 - 351649\}}}$$
$$r_{xy} = \frac{629}{\sqrt{59 \cdot 10751}}$$
$$r_{xy} = \frac{629}{\sqrt{634309}} = \frac{629}{796,435} = 0,789$$

Butir soal 21

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$
$$r_{xy} = \frac{12 \cdot 1454 - 29 \cdot 593}{\sqrt{\{12 \cdot 73 - (29)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$
$$r_{xy} = \frac{17448 - 17193}{\sqrt{\{876 - 841\} \cdot \{362400 - 351649\}}}$$
$$r_{xy} = \frac{251}{\sqrt{35 \cdot 10751}}$$
$$r_{xy} = \frac{251}{\sqrt{376285}} = \frac{251}{613,42} = 0,409$$

Butir soal 22

$$r_{xy} = \frac{n\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{n\Sigma X^2 - (\Sigma X)^2\} \cdot \{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$
$$r_{xy} = \frac{12 \cdot 1434 - 30 \cdot 593}{\sqrt{\{12 \cdot 78 - (30)^2\} \cdot \{12 \cdot 30200 - (593)^2\}}}$$
$$r_{xy} = \frac{17208 - 17790}{\sqrt{\{936 - 900\} \cdot \{362400 - 351649\}}}$$
$$r_{xy} = \frac{-582}{\sqrt{36 \cdot 10751}}$$
$$r_{xy} = \frac{-582}{\sqrt{387036}} = \frac{-582}{622,122} = -0,935$$