**Single items used (the same model produced a better fit using factor scores)**

**latents.model7 <- 'SALES =~ SQ18 + SQ15 + SQ16 + SQ17 + SQ19 + SQ20 + SQ21 + SQ22 + SQ24 + SQ23 + SQ25 + SQ26 + SQ27 + SQ28 + SQ29 + SQ31 + SQ32**

**PerfGoals =~ PQ09 + PQ06 + PQ07 + PQ08 + PQ10 + PQ14 + PQ11 + PQ12 + PQ13**

**MG\_SE\_P =~ PQ16 + PQ15 + PQ17 + PQ18 + PQ19 + PQ02 + PQ01 + PQ03 + PQ04 + PQ05'**

This model removed SE\_S, though it appeared in the factor models, it decreased here.

**lavaan 0.6-7 ended normally after 46 iterations**

Estimator ML

Optimization method NLMINB

Number of free parameters 75

Used Total

Number of observations 353 359

Model Test User Model:

Standard Robust

Test Statistic 1830.712 1390.314

Degrees of freedom 591 591

P-value (Chi-square) 0.000 0.000

Scaling correction factor 1.317

Satorra-Bentler correction

Model Test Baseline Model:

Test statistic 6822.466 4859.365

Degrees of freedom 630 630

P-value 0.000 0.000

Scaling correction factor 1.404

User Model versus Baseline Model:

Comparative Fit Index (CFI) 0.800 0.811

Tucker-Lewis Index (TLI) 0.787 0.799

Robust Comparative Fit Index (CFI) 0.823

Robust Tucker-Lewis Index (TLI) 0.811

Loglikelihood and Information Criteria:

Loglikelihood user model (H0) -15020.645 -15020.645

Loglikelihood unrestricted model (H1) -14105.289 -14105.289

Akaike (AIC) 30191.290 30191.290

Bayesian (BIC) 30481.276 30481.276

Sample-size adjusted Bayesian (BIC) 30243.345 30243.345

Root Mean Square Error of Approximation:

RMSEA 0.077 0.062

90 Percent confidence interval - lower 0.073 0.058

90 Percent confidence interval - upper 0.081 0.066

P-value RMSEA <= 0.05 0.000 0.000

Robust RMSEA 0.071

90 Percent confidence interval - lower 0.066

90 Percent confidence interval - upper 0.076

Standardized Root Mean Square Residual:

SRMR 0.065 0.065

Parameter Estimates:

Standard errors Robust.sem

Information Expected

Information saturated (h1) model Structured

Latent Variables:

Estimate Std.Err z-value P(>|z|)

SALES =~

SQ18 1.000

SQ15 0.930 0.078 11.883 0.000

SQ16 0.883 0.085 10.448 0.000

SQ17 0.935 0.081 11.614 0.000

SQ19 0.766 0.082 9.296 0.000

SQ20 0.728 0.073 9.926 0.000

SQ21 0.827 0.087 9.491 0.000

SQ22 0.781 0.073 10.717 0.000

SQ24 1.075 0.072 14.829 0.000

SQ23 0.906 0.062 14.514 0.000

SQ25 1.032 0.094 11.040 0.000

SQ26 0.528 0.081 6.507 0.000

SQ27 0.611 0.090 6.772 0.000

SQ28 0.829 0.072 11.533 0.000

SQ29 0.987 0.089 11.040 0.000

SQ31 0.623 0.084 7.439 0.000

SQ32 0.575 0.090 6.366 0.000

PerfGoals =~

PQ09 1.000

PQ06 0.868 0.044 19.842 0.000

PQ07 0.830 0.046 18.066 0.000

PQ08 0.809 0.045 18.137 0.000

PQ10 0.992 0.032 31.189 0.000

PQ14 0.753 0.053 14.325 0.000

PQ11 0.686 0.045 15.146 0.000

PQ12 0.748 0.055 13.566 0.000

PQ13 0.698 0.050 14.089 0.000

MG\_SE\_P =~

PQ16 1.000

PQ15 0.935 0.094 9.910 0.000

PQ17 0.921 0.113 8.139 0.000

PQ18 0.941 0.120 7.821 0.000

PQ19 0.894 0.110 8.115 0.000

PQ02 0.967 0.137 7.056 0.000

PQ01 0.910 0.130 7.026 0.000

PQ03 0.977 0.141 6.910 0.000

PQ04 0.616 0.102 6.015 0.000

PQ05 0.802 0.139 5.755 0.000

Covariances:

Estimate Std.Err z-value P(>|z|)

SALES ~~

PerfGoals 0.110 0.041 2.662 0.008

MG\_SE\_P 0.245 0.035 7.035 0.000

PerfGoals ~~

MG\_SE\_P 0.087 0.046 1.897 0.058

Variances:

Estimate Std.Err z-value P(>|z|)

.SQ18 0.345 0.038 8.963 0.000

.SQ15 0.662 0.049 13.456 0.000

.SQ16 0.509 0.048 10.579 0.000

.SQ17 0.376 0.056 6.767 0.000

.SQ19 0.517 0.048 10.676 0.000

.SQ20 0.463 0.040 11.706 0.000

.SQ21 0.710 0.063 11.240 0.000

.SQ22 0.377 0.035 10.655 0.000

.SQ24 0.321 0.037 8.800 0.000

.SQ23 0.280 0.033 8.503 0.000

.SQ25 0.402 0.041 9.831 0.000

.SQ26 0.223 0.027 8.306 0.000

.SQ27 0.240 0.033 7.261 0.000

.SQ28 0.281 0.040 6.975 0.000

.SQ29 0.323 0.031 10.585 0.000

.SQ31 0.228 0.032 7.181 0.000

.SQ32 0.250 0.034 7.263 0.000

.PQ09 0.448 0.049 9.144 0.000

.PQ06 0.858 0.090 9.561 0.000

.PQ07 1.031 0.104 9.940 0.000

.PQ08 0.790 0.090 8.746 0.000

.PQ10 0.534 0.069 7.770 0.000

.PQ14 1.385 0.108 12.773 0.000

.PQ11 1.044 0.075 13.828 0.000

.PQ12 1.282 0.111 11.570 0.000

.PQ13 1.304 0.090 14.460 0.000

.PQ16 0.840 0.074 11.289 0.000

.PQ15 0.585 0.053 11.066 0.000

.PQ17 0.452 0.045 10.021 0.000

.PQ18 0.402 0.045 8.856 0.000

.PQ19 0.473 0.046 10.199 0.000

.PQ02 0.662 0.066 9.963 0.000

.PQ01 0.665 0.064 10.343 0.000

.PQ03 0.780 0.071 10.915 0.000

.PQ04 0.474 0.072 6.566 0.000

.PQ05 0.598 0.056 10.729 0.000

SALES 0.383 0.064 6.011 0.000

PerfGoals 1.498 0.118 12.650 0.000

MG\_SE\_P 0.407 0.076 5.324 0.000

$FIT

npar fmin

75.000 2.593

chisq df

1830.712 591.000

pvalue chisq.scaled

0.000 1390.314

df.scaled pvalue.scaled

591.000 0.000

chisq.scaling.factor baseline.chisq

1.317 6822.466

baseline.df baseline.pvalue

630.000 0.000

baseline.chisq.scaled baseline.df.scaled

4859.365 630.000

baseline.pvalue.scaled baseline.chisq.scaling.factor

0.000 1.404

cfi tli

0.800 0.787

cfi.scaled tli.scaled

0.811 0.799

cfi.robust tli.robust

0.823 0.811

logl unrestricted.logl

-15020.645 -14105.289

aic bic

30191.290 30481.276

ntotal bic2

353.000 30243.345

rmsea rmsea.ci.lower

0.077 0.073

rmsea.ci.upper rmsea.pvalue

0.081 0.000

rmsea.scaled rmsea.ci.lower.scaled

0.062 0.058

rmsea.ci.upper.scaled rmsea.pvalue.scaled

0.066 0.000

rmsea.robust rmsea.ci.lower.robust

0.071 0.066

rmsea.ci.upper.robust rmsea.pvalue.robust

0.076 NA

srmr

0.065

$PE

lhs op rhs exo est se z

1 SALES =~ SQ18 0 1.00000000 0.00000000 NA

2 SALES =~ SQ15 0 0.93015757 0.07827841 11.882683

3 SALES =~ SQ16 0 0.88300768 0.08451549 10.447880

4 SALES =~ SQ17 0 0.93535417 0.08053429 11.614359

5 SALES =~ SQ19 0 0.76579351 0.08237869 9.296014

6 SALES =~ SQ20 0 0.72756523 0.07329883 9.926014

7 SALES =~ SQ21 0 0.82704788 0.08714430 9.490556

8 SALES =~ SQ22 0 0.78092228 0.07287015 10.716628

9 SALES =~ SQ24 0 1.07497295 0.07249166 14.828919

10 SALES =~ SQ23 0 0.90568737 0.06240070 14.514057

11 SALES =~ SQ25 0 1.03247720 0.09352427 11.039671

12 SALES =~ SQ26 0 0.52832646 0.08119158 6.507158

13 SALES =~ SQ27 0 0.61118161 0.09025480 6.771735

14 SALES =~ SQ28 0 0.82906174 0.07188887 11.532547

15 SALES =~ SQ29 0 0.98710051 0.08941377 11.039692

16 SALES =~ SQ31 0 0.62339415 0.08380426 7.438692

17 SALES =~ SQ32 0 0.57535628 0.09037733 6.366157

18 PerfGoals =~ PQ09 0 1.00000000 0.00000000 NA

19 PerfGoals =~ PQ06 0 0.86806606 0.04374976 19.841617

20 PerfGoals =~ PQ07 0 0.82989747 0.04593637 18.066242

21 PerfGoals =~ PQ08 0 0.80886164 0.04459738 18.136977

22 PerfGoals =~ PQ10 0 0.99191176 0.03180333 31.188926

23 PerfGoals =~ PQ14 0 0.75307126 0.05257143 14.324724

24 PerfGoals =~ PQ11 0 0.68638800 0.04531845 15.145885

25 PerfGoals =~ PQ12 0 0.74789202 0.05512799 13.566467

26 PerfGoals =~ PQ13 0 0.69804908 0.04954486 14.089233

27 MG\_SE\_P =~ PQ16 0 1.00000000 0.00000000 NA

28 MG\_SE\_P =~ PQ15 0 0.93491503 0.09433999 9.910060

29 MG\_SE\_P =~ PQ17 0 0.92118469 0.11318536 8.138727

30 MG\_SE\_P =~ PQ18 0 0.94147319 0.12038156 7.820743

31 MG\_SE\_P =~ PQ19 0 0.89445459 0.11021937 8.115221

32 MG\_SE\_P =~ PQ02 0 0.96662171 0.13698390 7.056462

33 MG\_SE\_P =~ PQ01 0 0.90997802 0.12951099 7.026261

34 MG\_SE\_P =~ PQ03 0 0.97744704 0.14146055 6.909679

35 MG\_SE\_P =~ PQ04 0 0.61637303 0.10247448 6.014893

36 MG\_SE\_P =~ PQ05 0 0.80219349 0.13939978 5.754625

37 SQ18 ~~ SQ18 0 0.34465251 0.03845102 8.963416

38 SQ15 ~~ SQ15 0 0.66186053 0.04918761 13.455837

39 SQ16 ~~ SQ16 0 0.50885213 0.04809882 10.579306

40 SQ17 ~~ SQ17 0 0.37643827 0.05563048 6.766762

41 SQ19 ~~ SQ19 0 0.51679555 0.04840860 10.675697

42 SQ20 ~~ SQ20 0 0.46342486 0.03958779 11.706257

43 SQ21 ~~ SQ21 0 0.71029997 0.06319496 11.239819

44 SQ22 ~~ SQ22 0 0.37664866 0.03534840 10.655325

45 SQ24 ~~ SQ24 0 0.32126237 0.03650813 8.799748

46 SQ23 ~~ SQ23 0 0.28045749 0.03298150 8.503479

47 SQ25 ~~ SQ25 0 0.40160657 0.04084916 9.831452

48 SQ26 ~~ SQ26 0 0.22257213 0.02679496 8.306494

49 SQ27 ~~ SQ27 0 0.24024970 0.03308743 7.261056

50 SQ28 ~~ SQ28 0 0.28053193 0.04022158 6.974663

51 SQ29 ~~ SQ29 0 0.32306552 0.03052091 10.585054

52 SQ31 ~~ SQ31 0 0.22774013 0.03171623 7.180555

53 SQ32 ~~ SQ32 0 0.25031795 0.03446336 7.263307

54 PQ09 ~~ PQ09 0 0.44768990 0.04896254 9.143519

55 PQ06 ~~ PQ06 0 0.85780790 0.08971613 9.561356

56 PQ07 ~~ PQ07 0 1.03080151 0.10369788 9.940430

57 PQ08 ~~ PQ08 0 0.79042977 0.09037656 8.745960

58 PQ10 ~~ PQ10 0 0.53373262 0.06868826 7.770361

59 PQ14 ~~ PQ14 0 1.38542541 0.10846239 12.773325

60 PQ11 ~~ PQ11 0 1.04356664 0.07546907 13.827739

61 PQ12 ~~ PQ12 0 1.28215277 0.11081694 11.570007

62 PQ13 ~~ PQ13 0 1.30424414 0.09019457 14.460339

63 PQ16 ~~ PQ16 0 0.84030902 0.07443813 11.288690

64 PQ15 ~~ PQ15 0 0.58450859 0.05282203 11.065622

65 PQ17 ~~ PQ17 0 0.45160306 0.04506524 10.021096

66 PQ18 ~~ PQ18 0 0.40179804 0.04537153 8.855731

67 PQ19 ~~ PQ19 0 0.47330717 0.04640718 10.199006

68 PQ02 ~~ PQ02 0 0.66239976 0.06648550 9.963071

69 PQ01 ~~ PQ01 0 0.66506730 0.06430101 10.343030

70 PQ03 ~~ PQ03 0 0.77980645 0.07144553 10.914699

71 PQ04 ~~ PQ04 0 0.47384783 0.07216597 6.566084

72 PQ05 ~~ PQ05 0 0.59781705 0.05572060 10.728833

73 SALES ~~ SALES 0 0.38259813 0.06365384 6.010606

74 PerfGoals ~~ PerfGoals 0 1.49815884 0.11843365 12.649774

75 MG\_SE\_P ~~ MG\_SE\_P 0 0.40650396 0.07634712 5.324418

76 SALES ~~ PerfGoals 0 0.11034945 0.04145211 2.662095

77 SALES ~~ MG\_SE\_P 0 0.24460133 0.03477101 7.034634

78 PerfGoals ~~ MG\_SE\_P 0 0.08743584 0.04609960 1.896673

pvalue

1 NA

2 0.0000000000000000000000

3 0.0000000000000000000000

4 0.0000000000000000000000

5 0.0000000000000000000000

6 0.0000000000000000000000

7 0.0000000000000000000000

8 0.0000000000000000000000

9 0.0000000000000000000000

10 0.0000000000000000000000

11 0.0000000000000000000000

12 0.0000000000765856267293

13 0.0000000000127247101744

14 0.0000000000000000000000

15 0.0000000000000000000000

16 0.0000000000001016964291

17 0.0000000001938231797283

18 NA

19 0.0000000000000000000000

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25 0.0000000000000000000000

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27 NA

28 0.0000000000000000000000

29 0.0000000000000004440892

30 0.0000000000000053290705

31 0.0000000000000004440892

32 0.0000000000017079671011

33 0.0000000000021214141555

34 0.0000000000048574477773

35 0.0000000018000583246192

36 0.0000000086834197610131

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71 0.0000000000516555687113

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73 0.0000000018483157226967

74 0.0000000000000000000000

75 0.0000001012770400876661

76 0.0077655901091091550370

77 0.0000000000019979573551

78 0.0578711732968086867146