

| MIPS versus VAX  |   |
|--|---|
| Saving register  |   |
| swap: addi \$29,\$29, -12<br>sw \$2, 0(\$29)<br>sw \$15, 4(\$29)<br>sw \$16, 8(\$29)                             | swap: .word ^m<r0,r1,r2,r3>   |
| Procedure body   |   |
| mul i \$2, \$5,4<br>add \$2, \$4,\$2<br>lw \$15, 0(\$2)<br>lw \$16, 4(\$2)<br>sw \$16, 0(\$2)<br>sw \$15, 4(\$2) | movl r2, 4(a)<br>movl r1, 8(a)<br>movl r3, (r2)[r1]<br>addl3 r0, #1,8(ap)<br>movl (r2)[r1],(r2)[r0]<br>movl (r2)[r0],r3 |
| Restoring registers  |   |
| lw \$2, 0(\$29)<br>lw \$15, 4(\$29)<br>lw \$16, 8(\$29)<br>addi \$29,\$29, 12                                    |   |
| Procedure return   |   |
| jr \$31  | ret   |

FIGURE E.54 MIPS versus VAX assembly code of the procedure swap in Figure E.53 on page E-30.