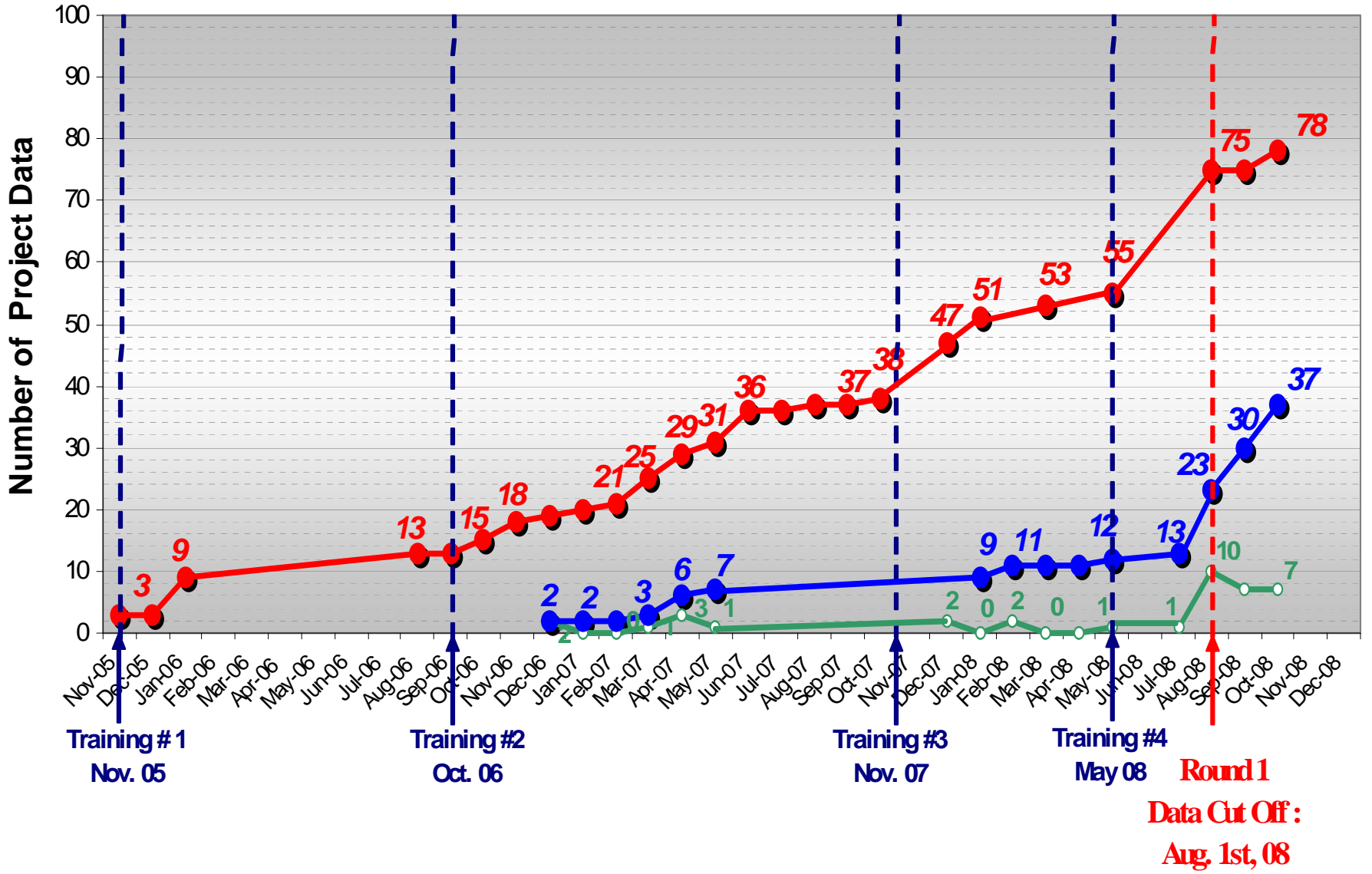


Benchmarking and the Alberta Report – a Government/Industry Partnership Alberta Report Phase I Results

Larry Sondrol
Stephen Revay FCJC CCC

Number of Project Data in COAA DB by Month (last updated Oct. 24th, 08)



Sample Box and Whisker Diagram

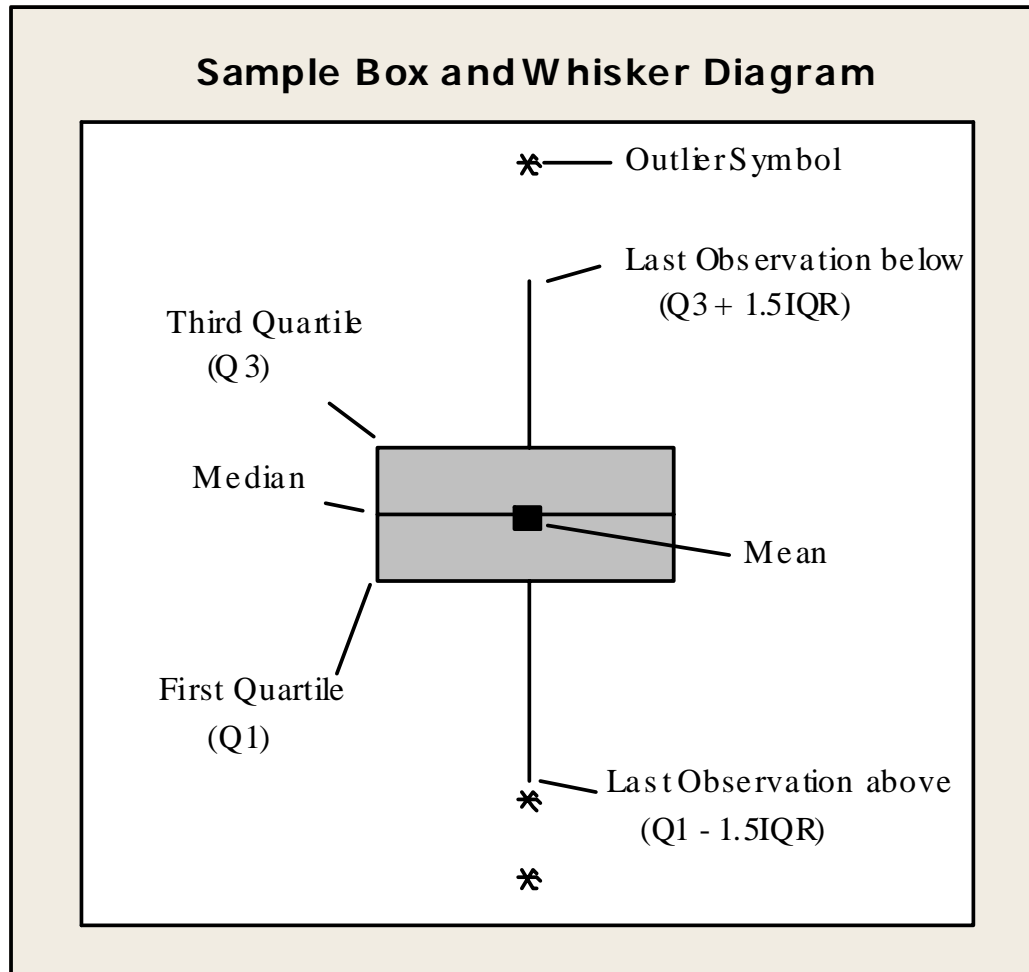


Figure 4-3 Construction Indirect / Direct Work hours (%)

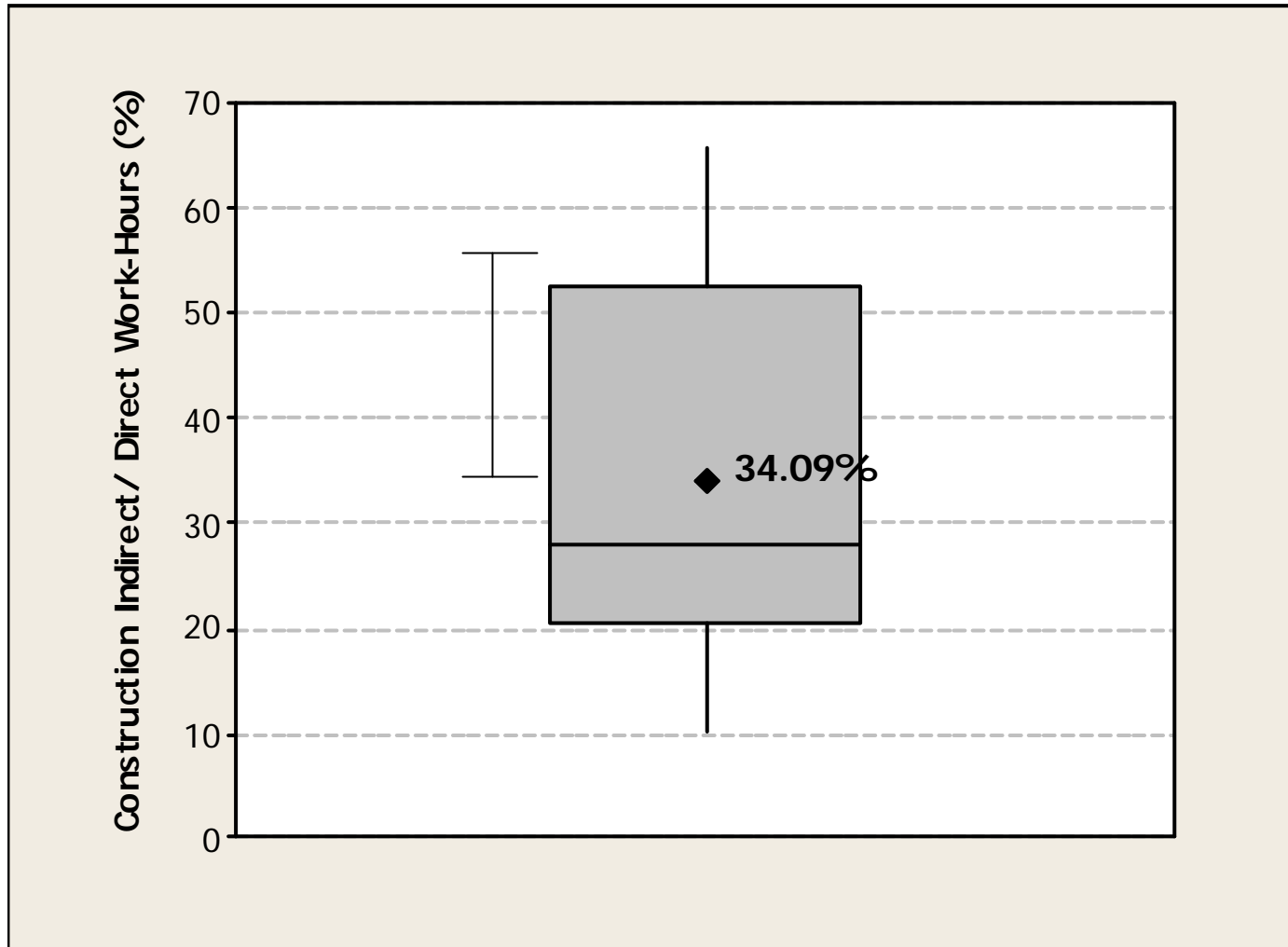


Figure 4-4 Construction Indirect Cost / Total Project Cost (%)

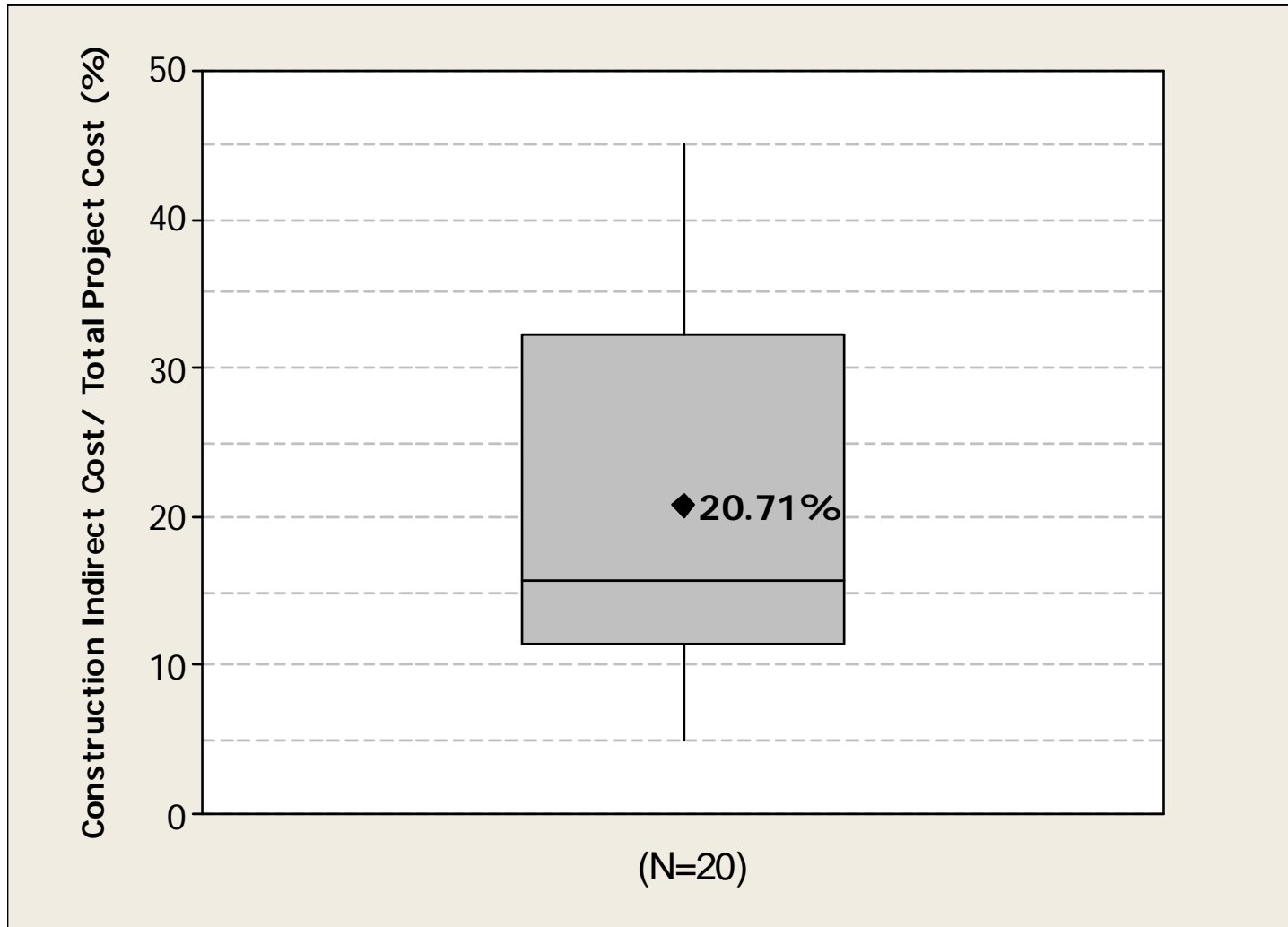


Figure 4-5 Modularization by Project Nature

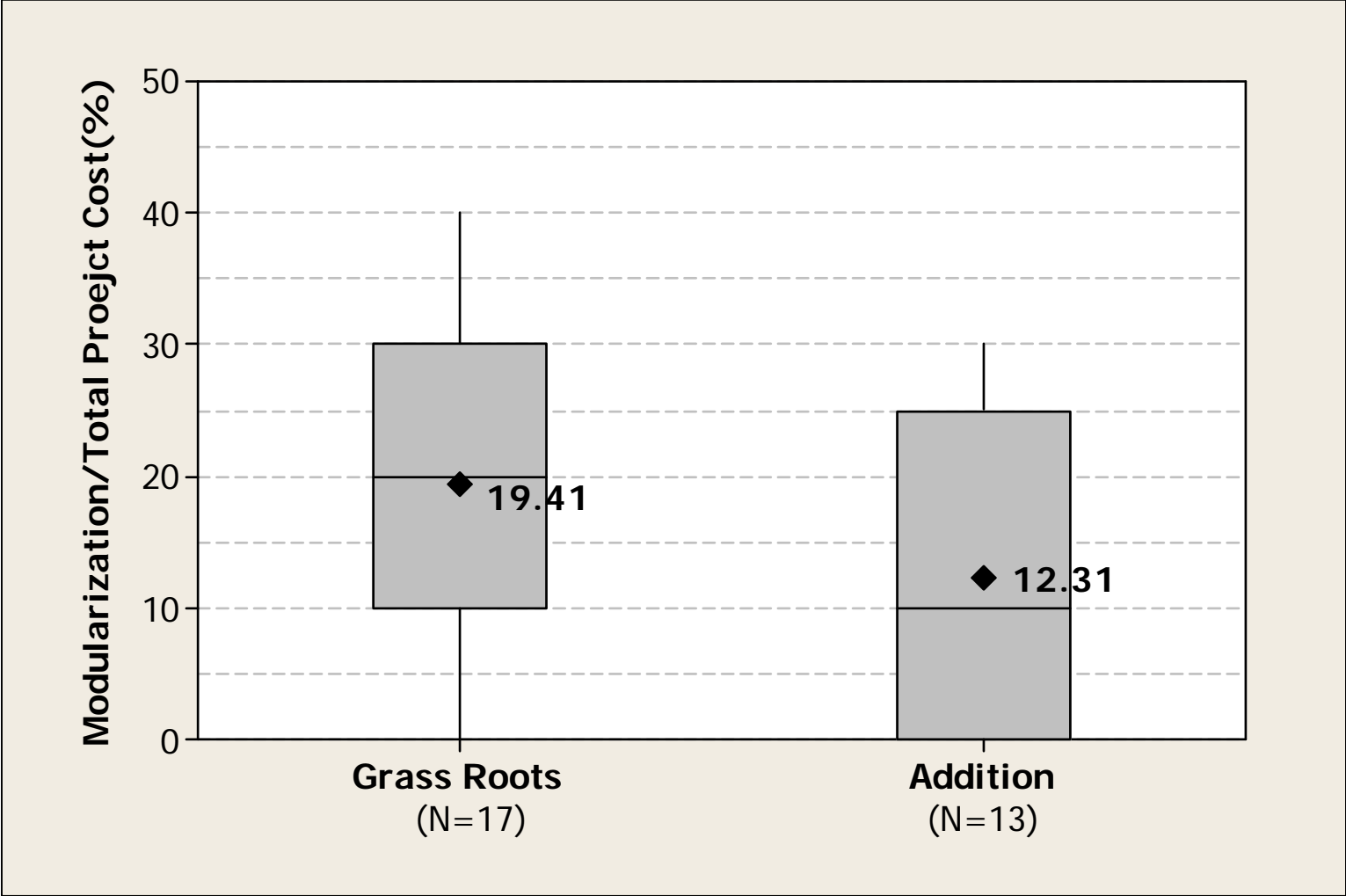


Figure 4-6 Project Cost Growth by Project Delivery System

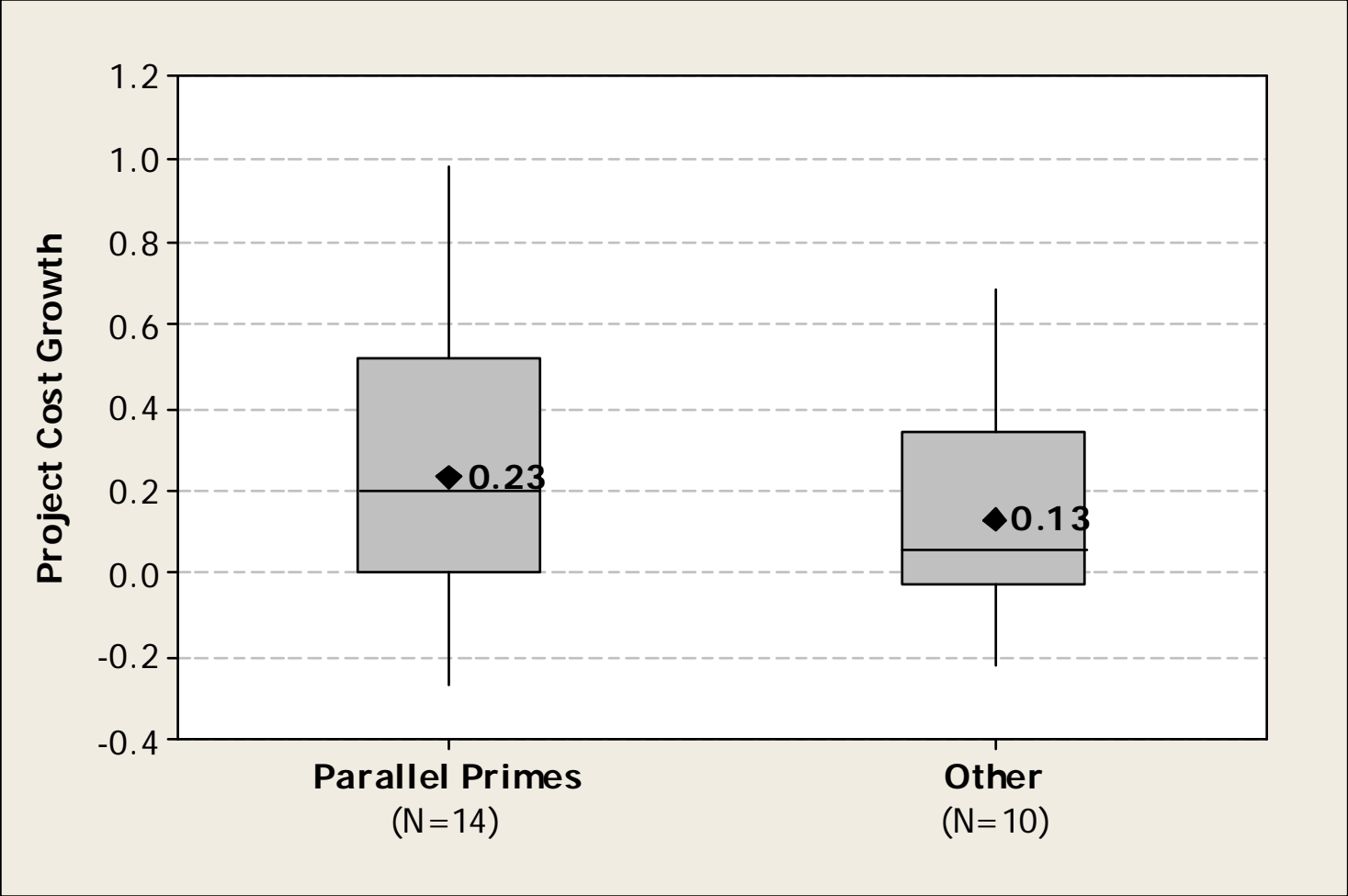
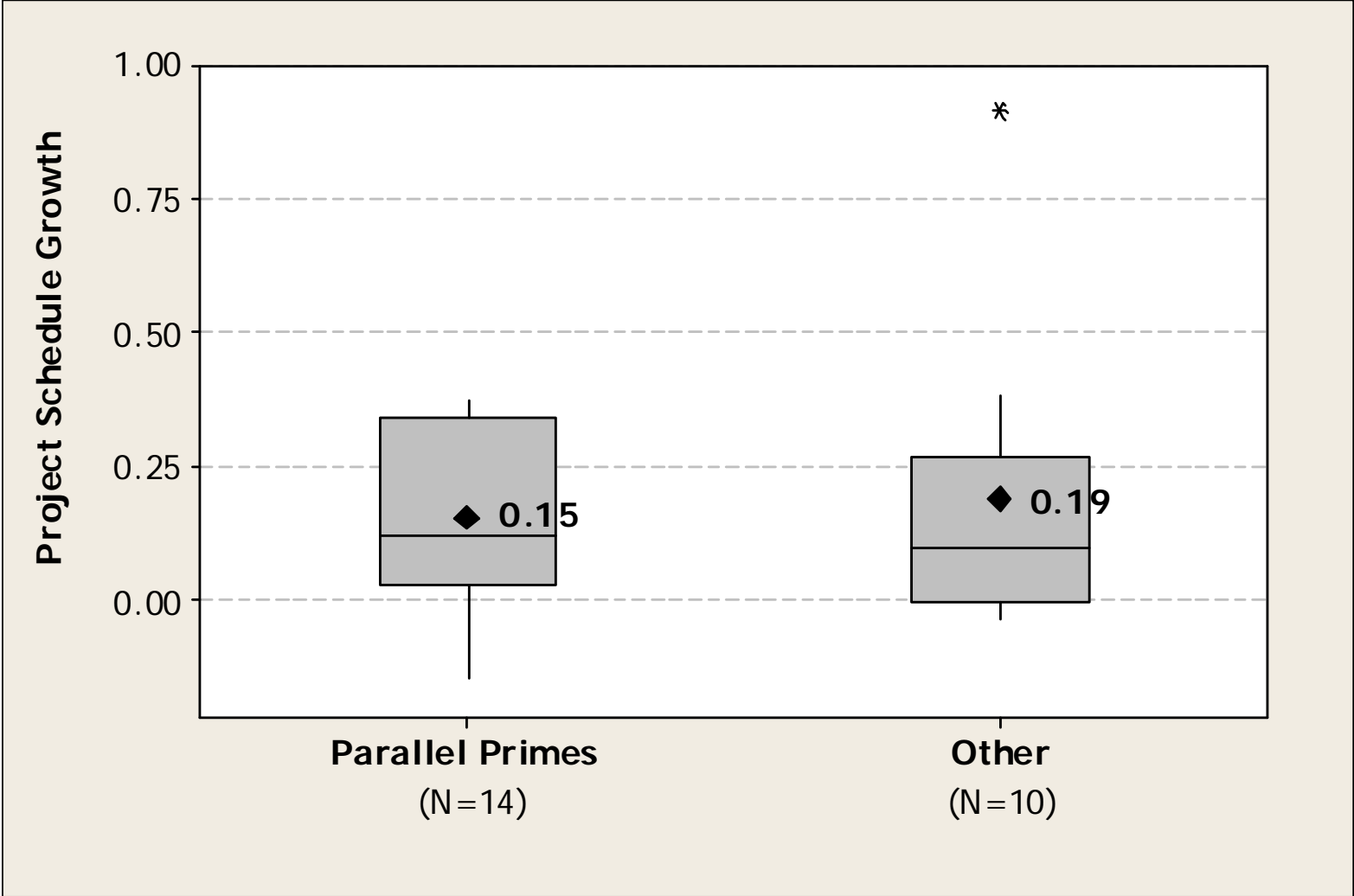


Figure 4-7 Project Schedule Growth by Project Delivery System



**Figure 4-8 Effect of % Engineering Completed before
Substantial Construction Started**

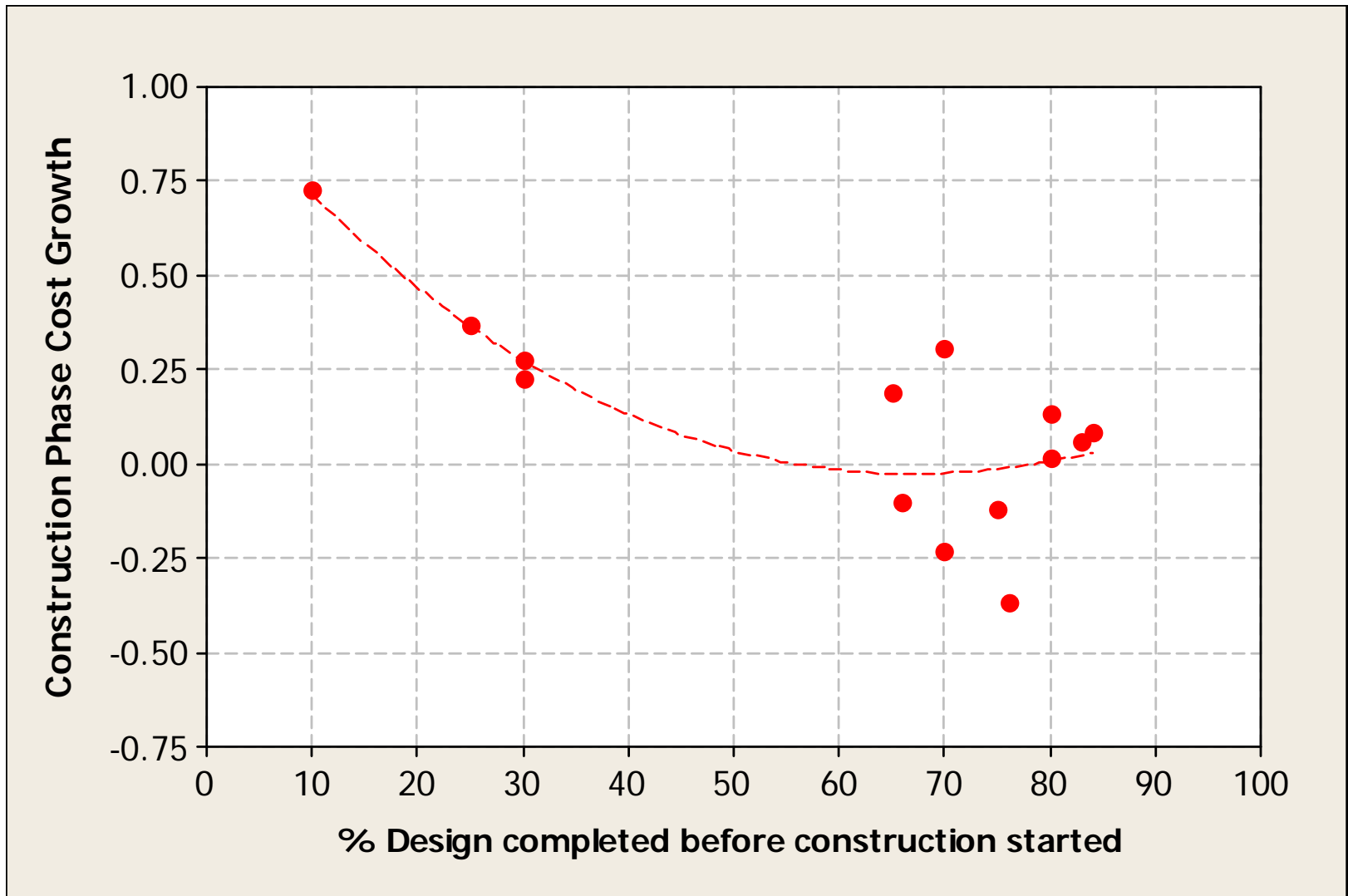


Figure 4-9 Actual / Estimated Number of Peak Construction Workforce

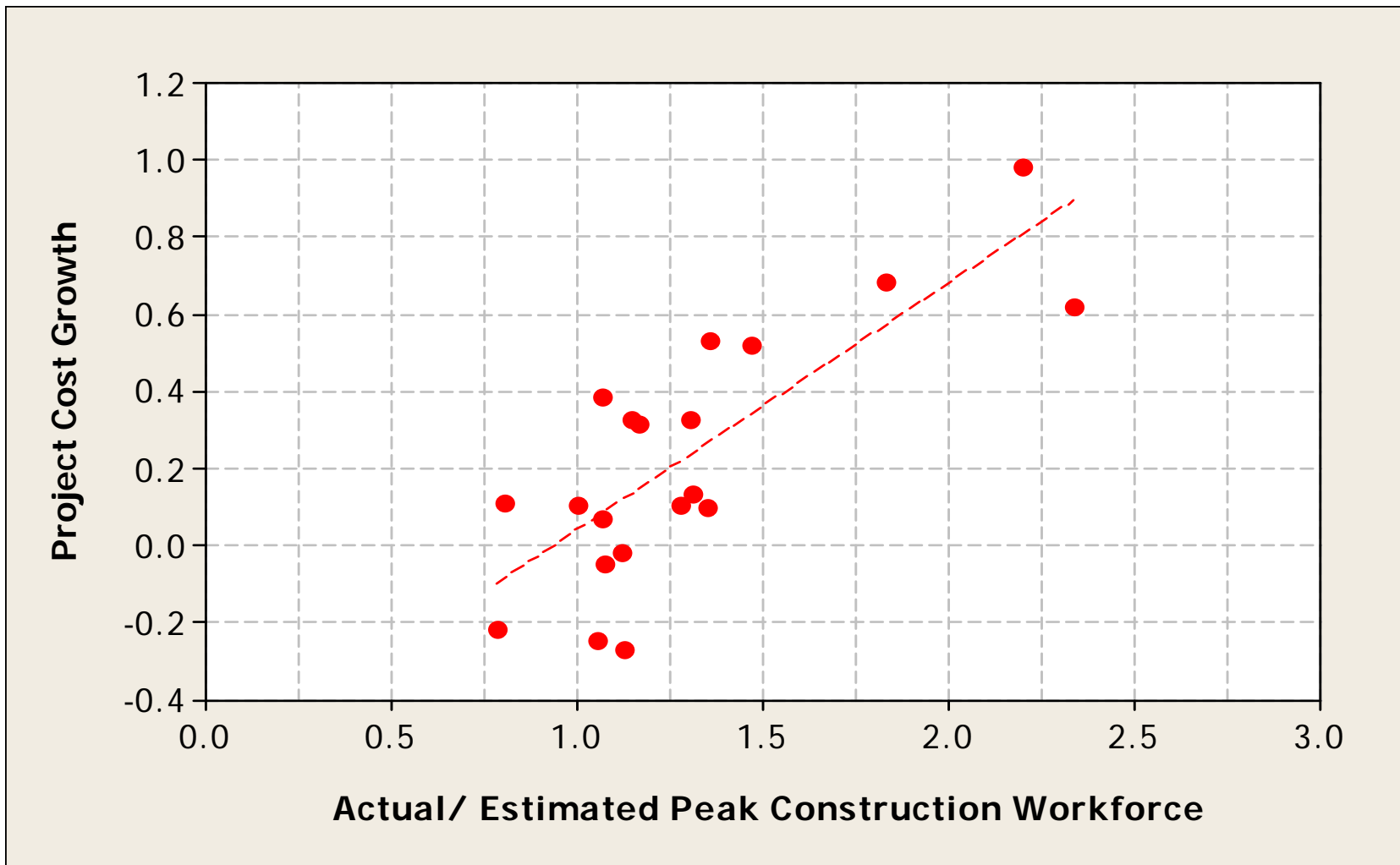


Figure 4-15 Workface Planning vs. Construction Schedule Growth

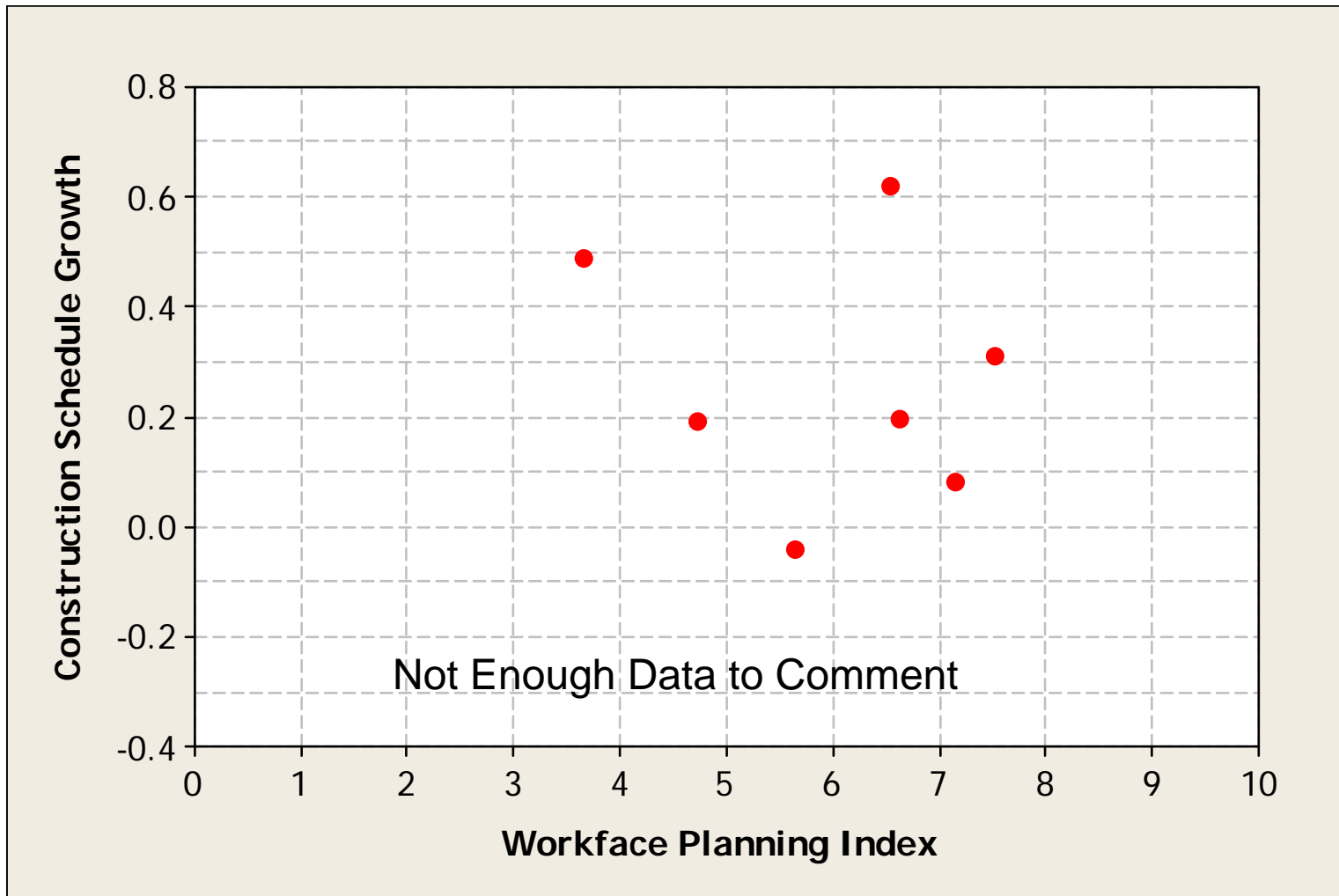


Figure 4-16 Project Size (\$M CDN, in 2007)

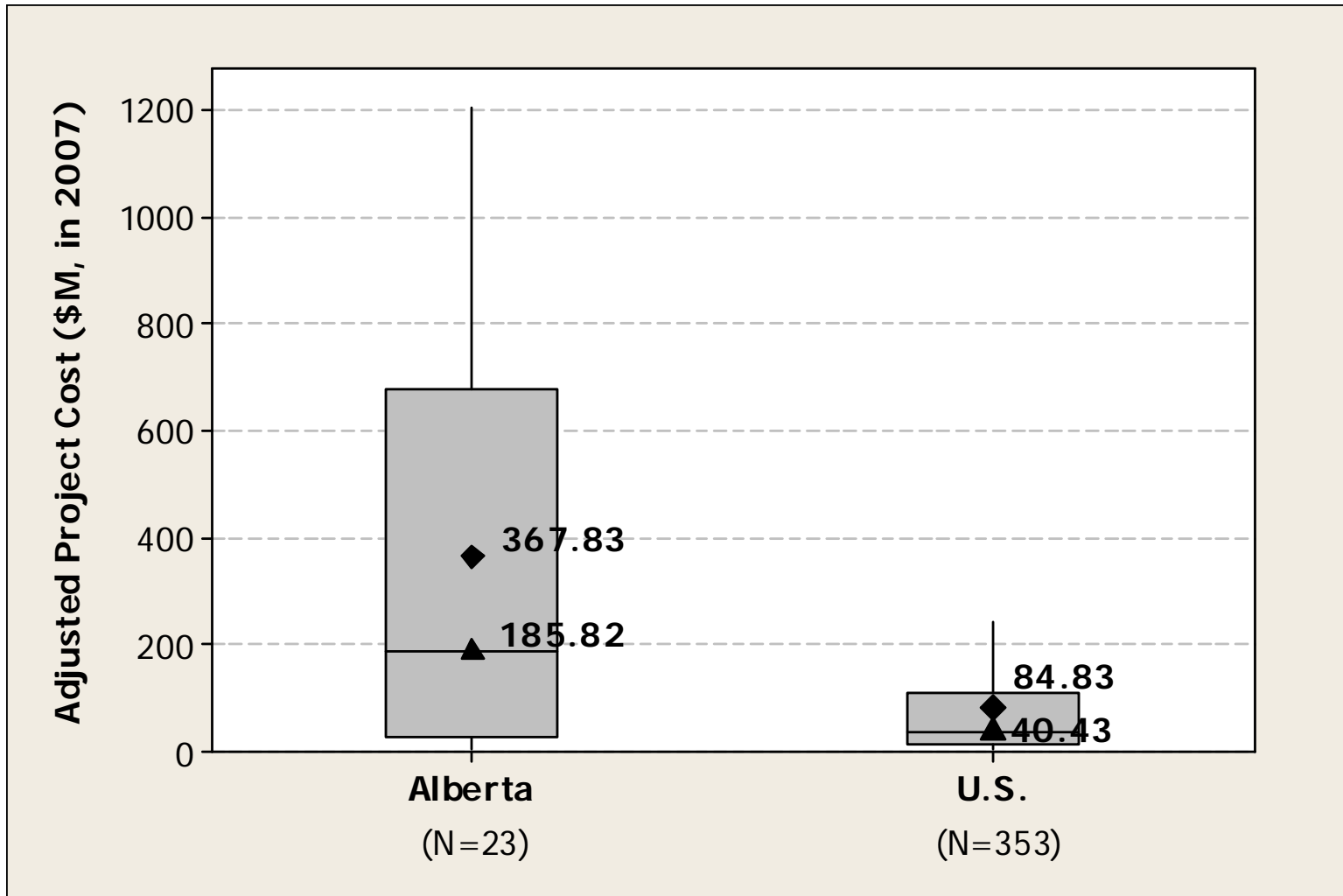


Figure 4-17 Contingency Budget (%)

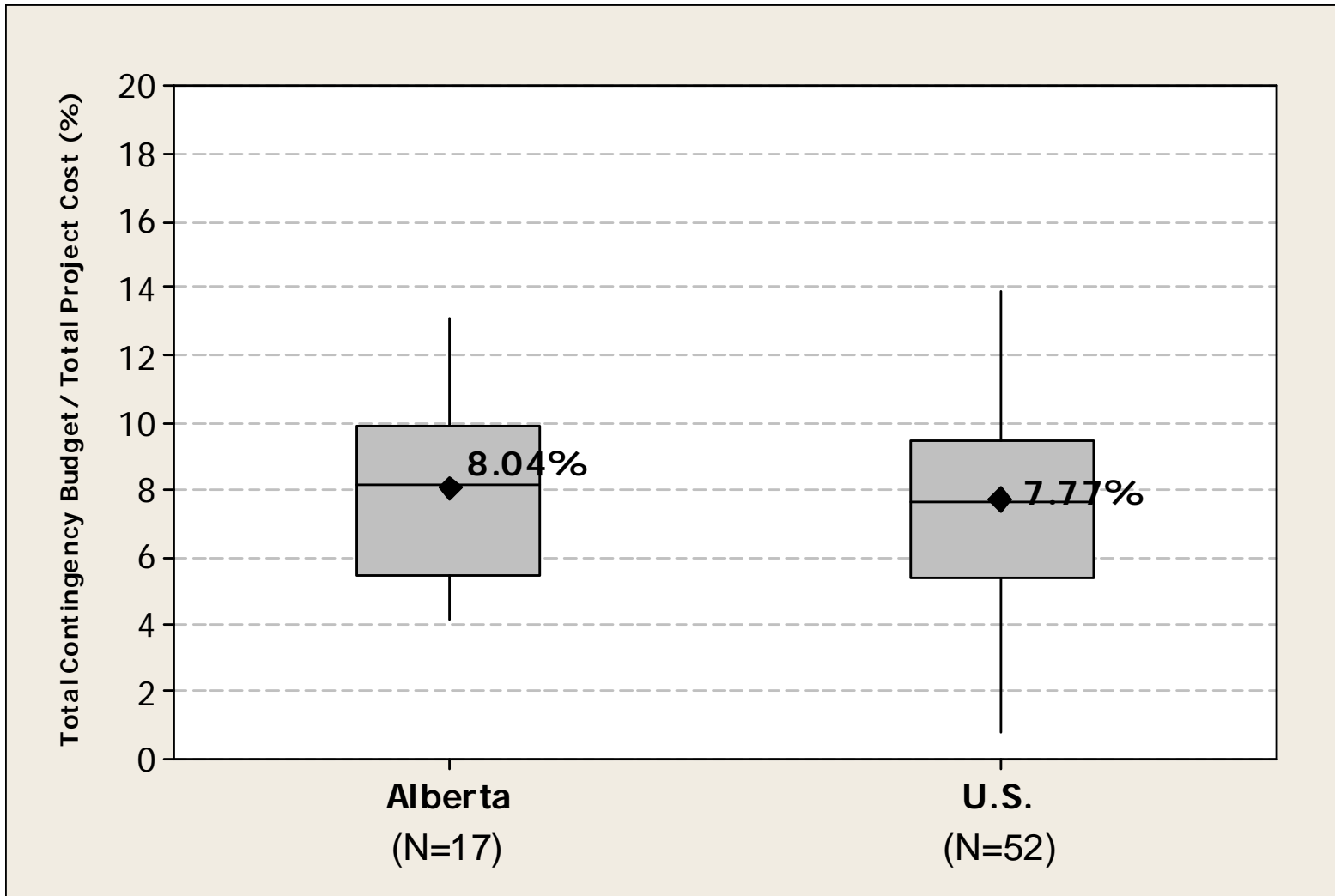


Figure 4-18 Project Cost Growth

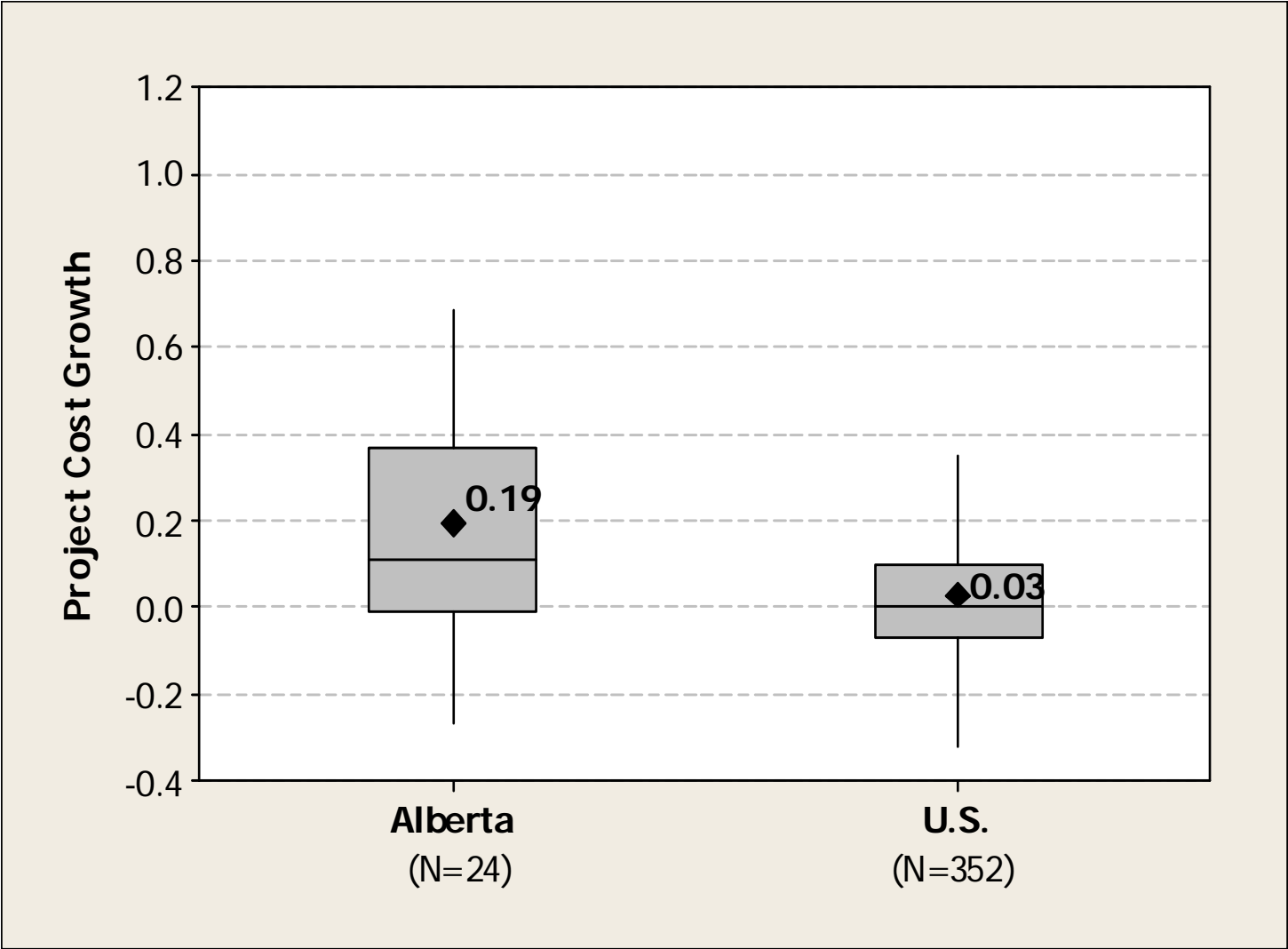


Figure 4-19

Project Schedule Growth

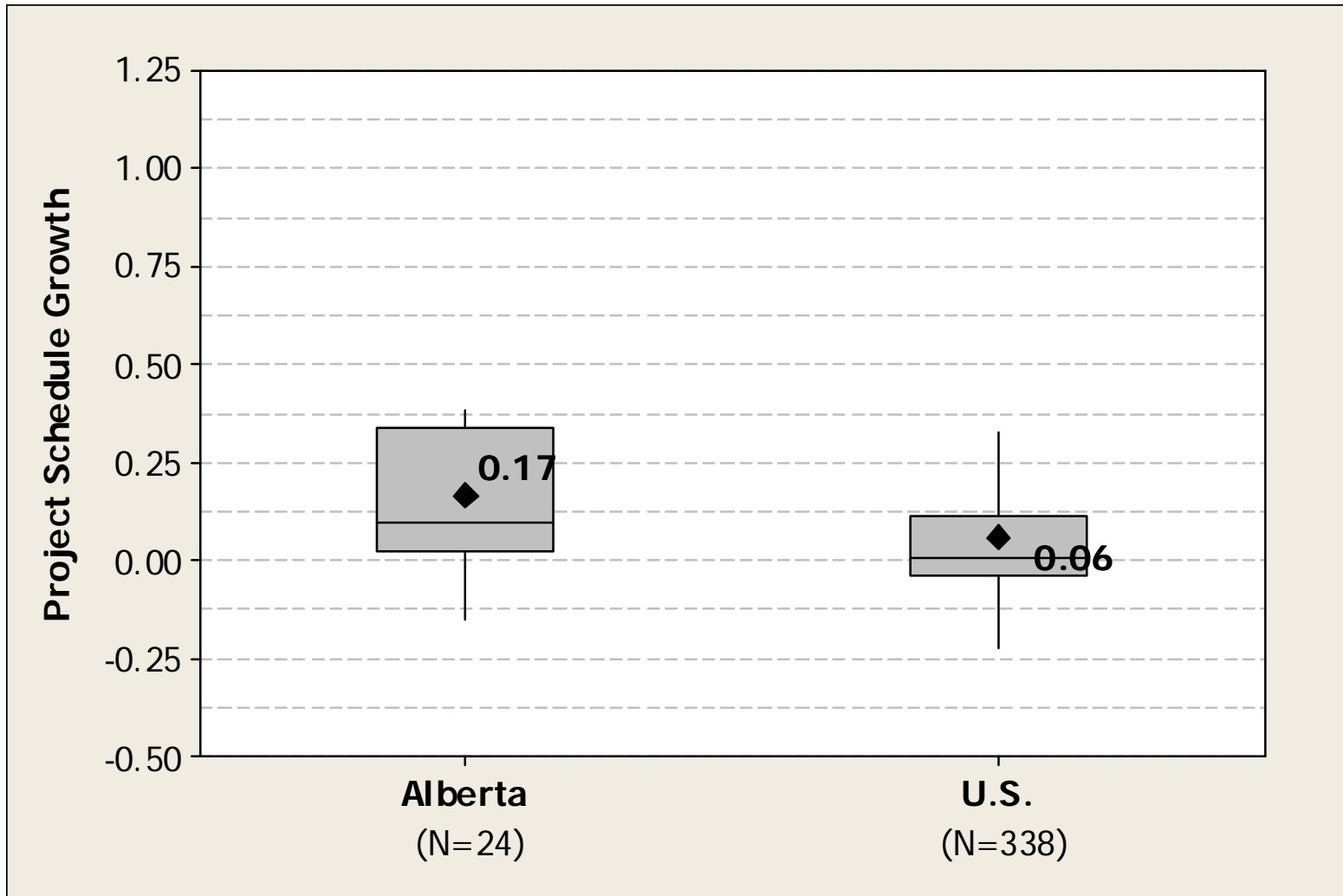


Figure 4-20

Development and Scope Change Cost Factor

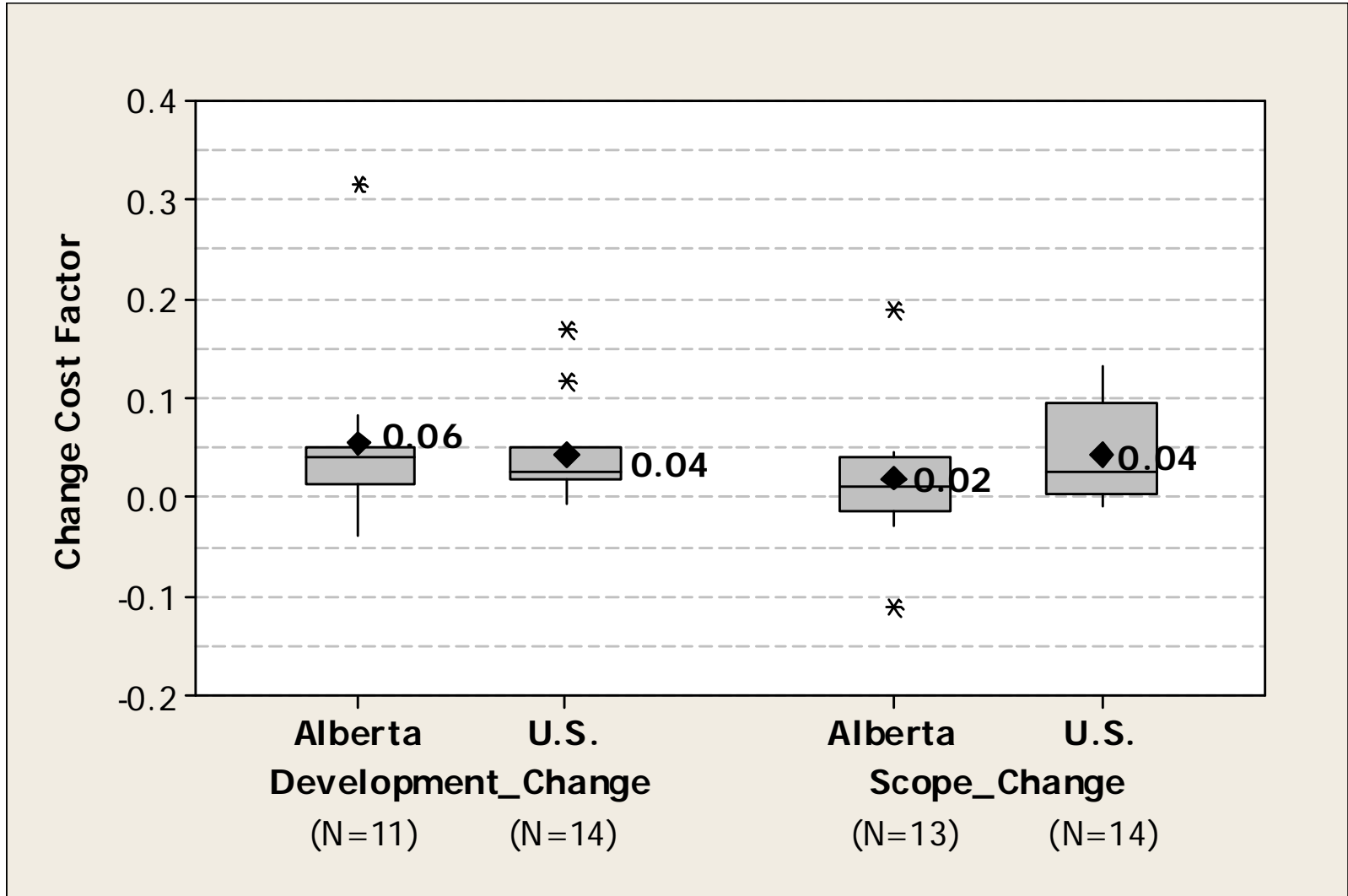


Figure 4-21
Comparison of Project Size (\$M CDN, in 2007) for
Engineering Productivity Dataset

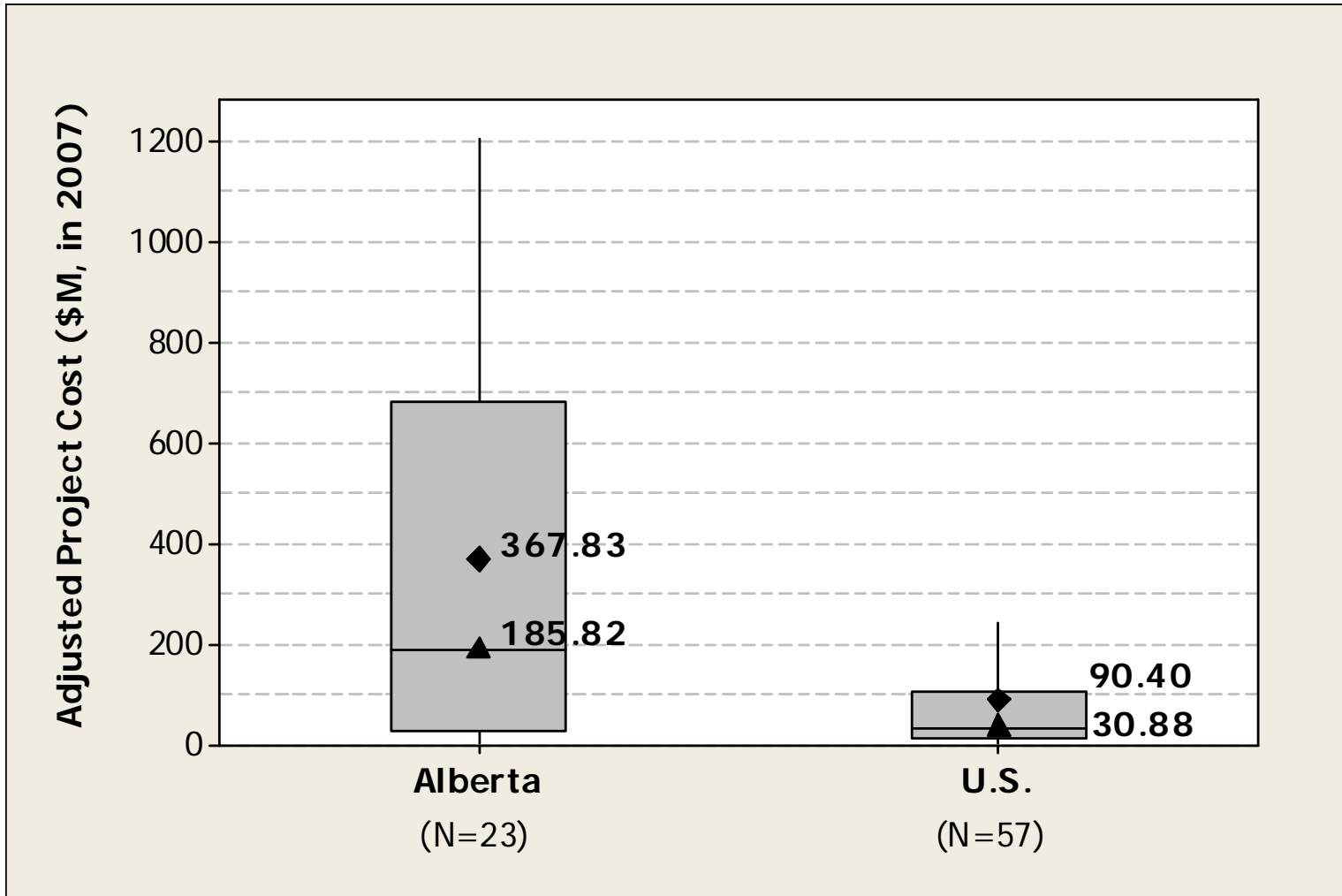


Figure 4-22

Comparison of Concrete Engineering Productivity (WH/ Cubic Meter)

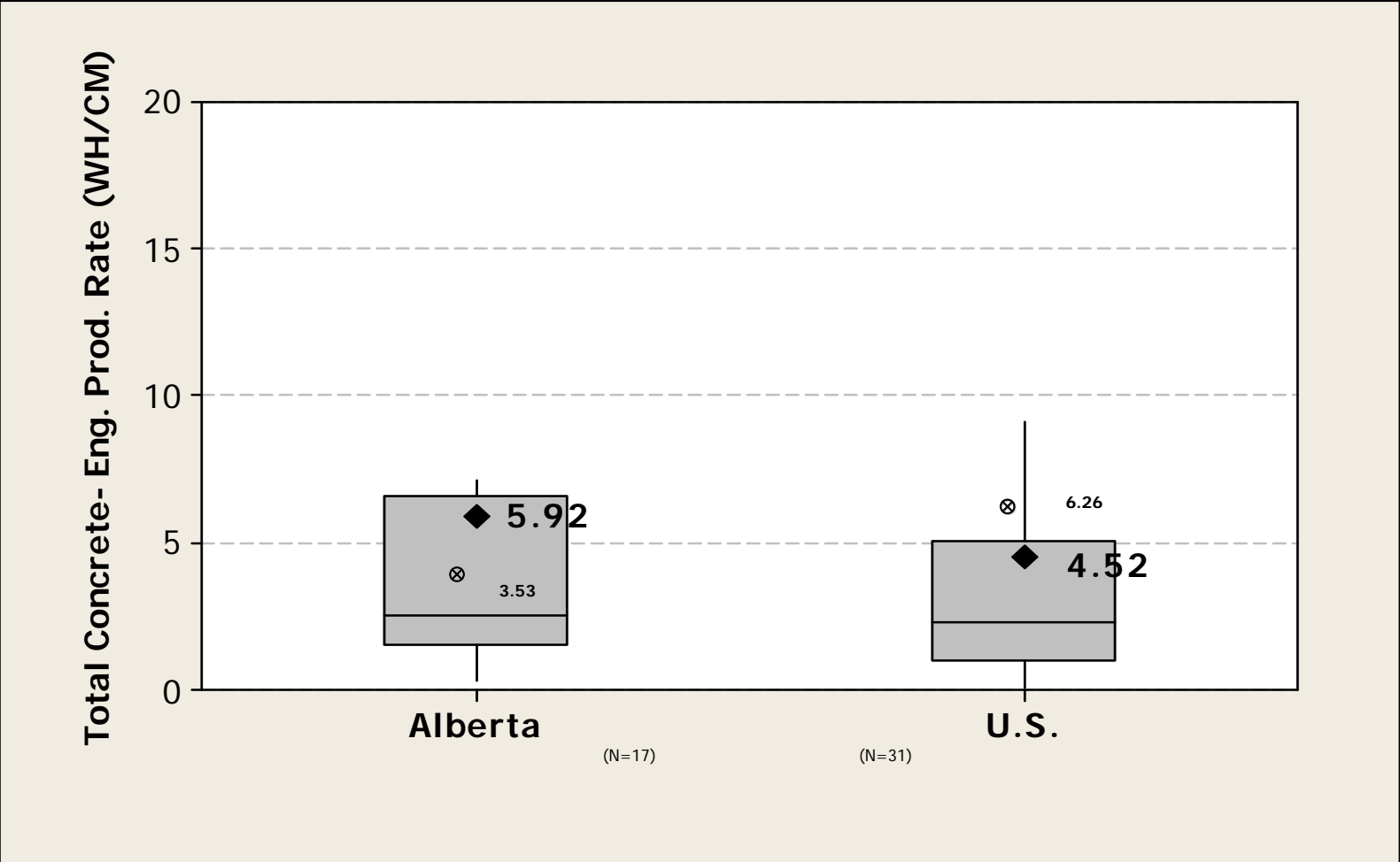


Figure 4-23

Comparison of Structural Steel Engineering Productivity (WH/ Metric Ton)

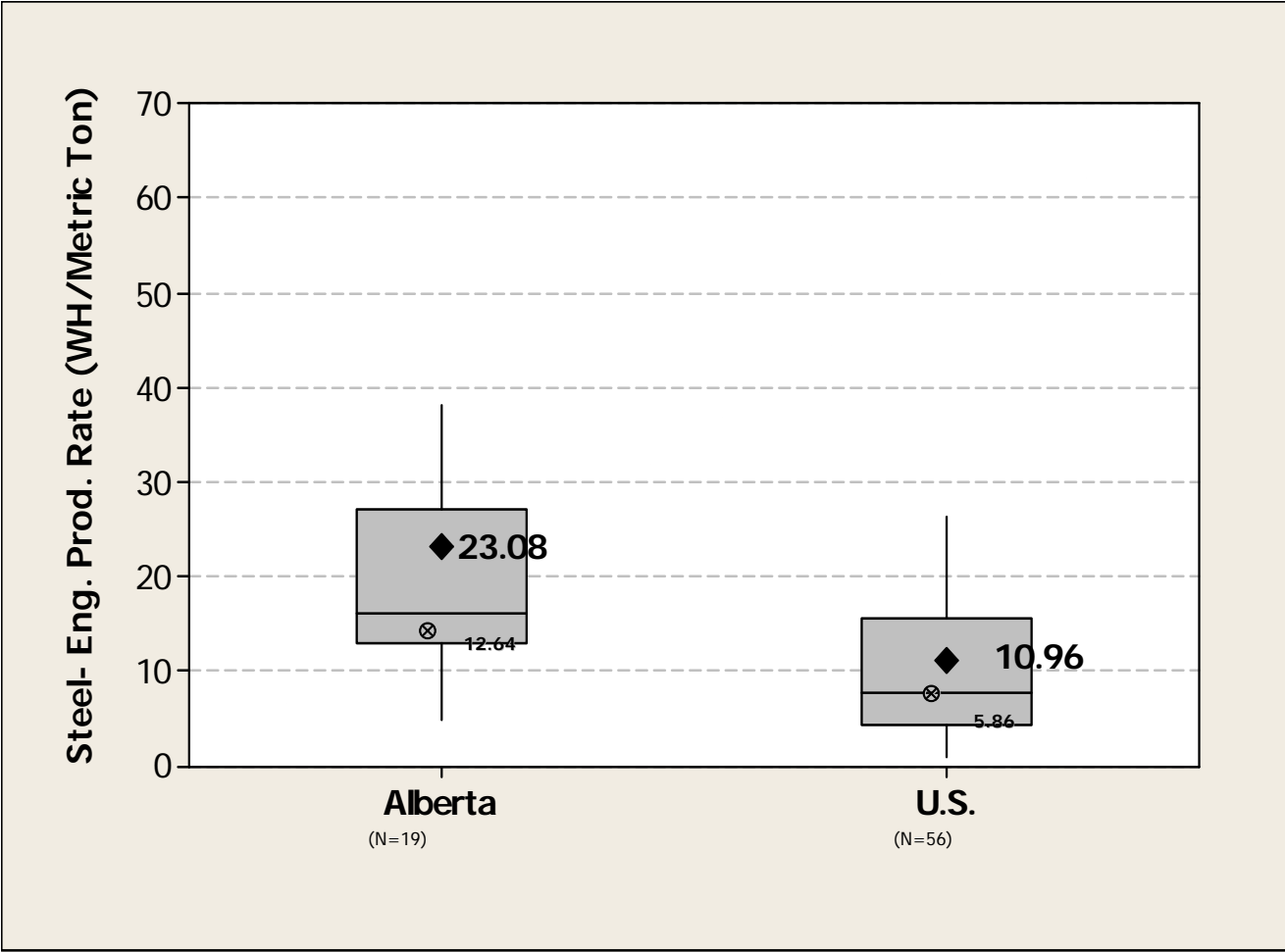


Figure 4-24

Comparison of Piping Engineering Productivity (WH/ Linear Meter)

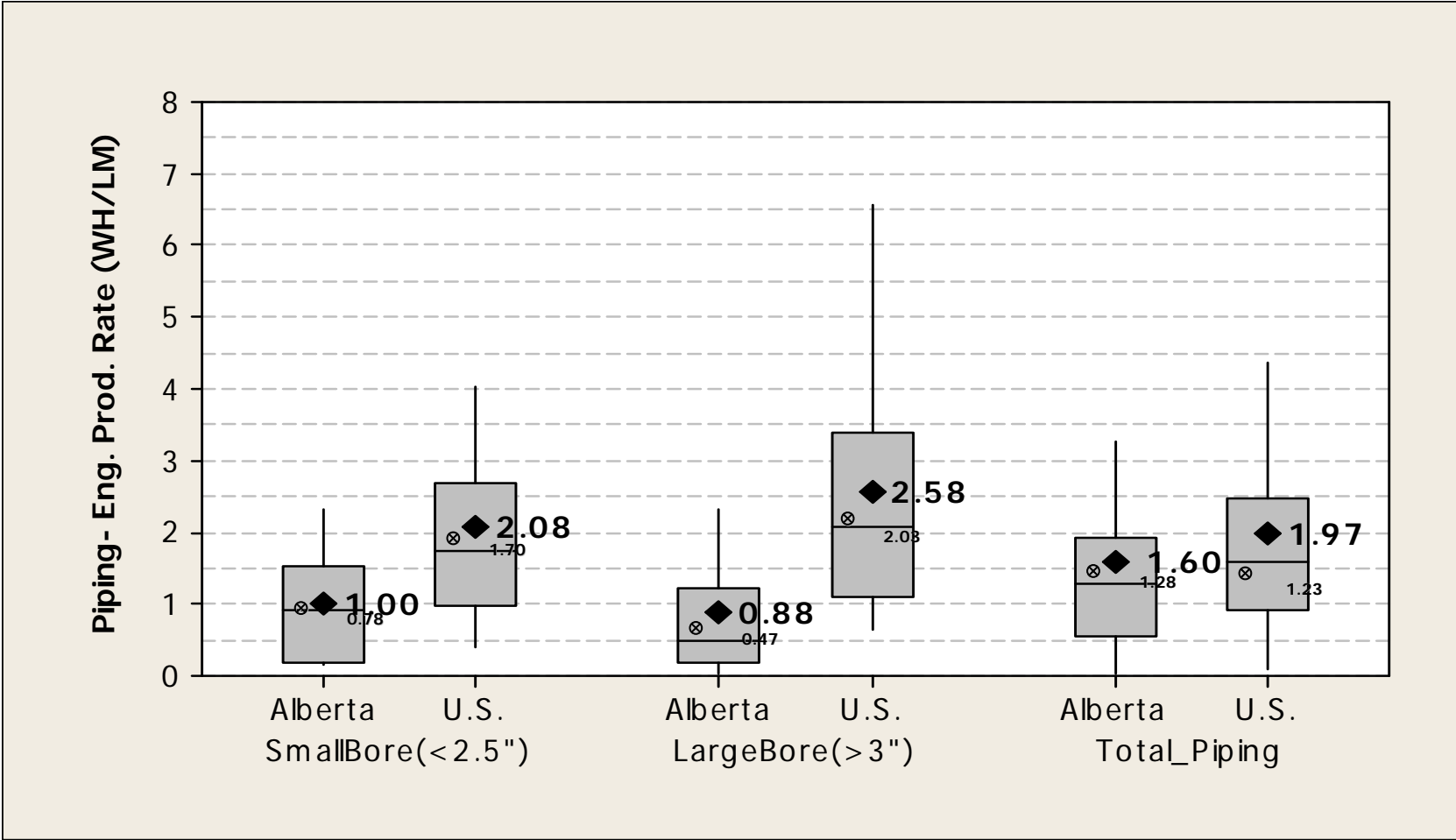


Figure 4-XX

Comparison of Electrical Engineering Productivity

Not enough data to produce results.

More projects required.

Figure 4-XX

Comparison of Instrumentation Engineering Productivity

Not enough data to produce results.

More projects required.

Figure 4-25

Comparison of Project Size (\$M CDN, in 2007) for Construction Productivity

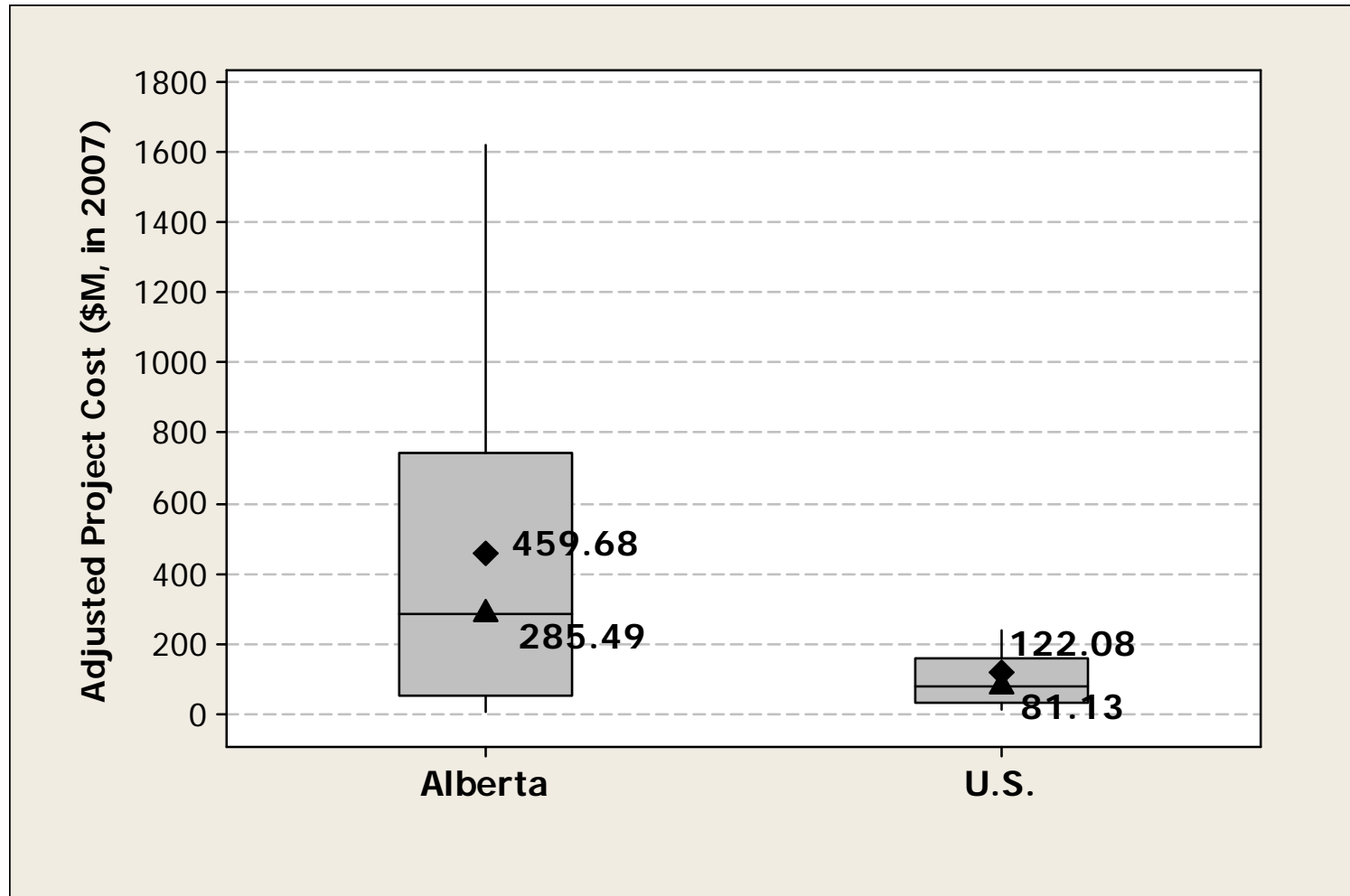


Figure 4-26

Comparison of Total Concrete Construction Productivity (WH/ m3)

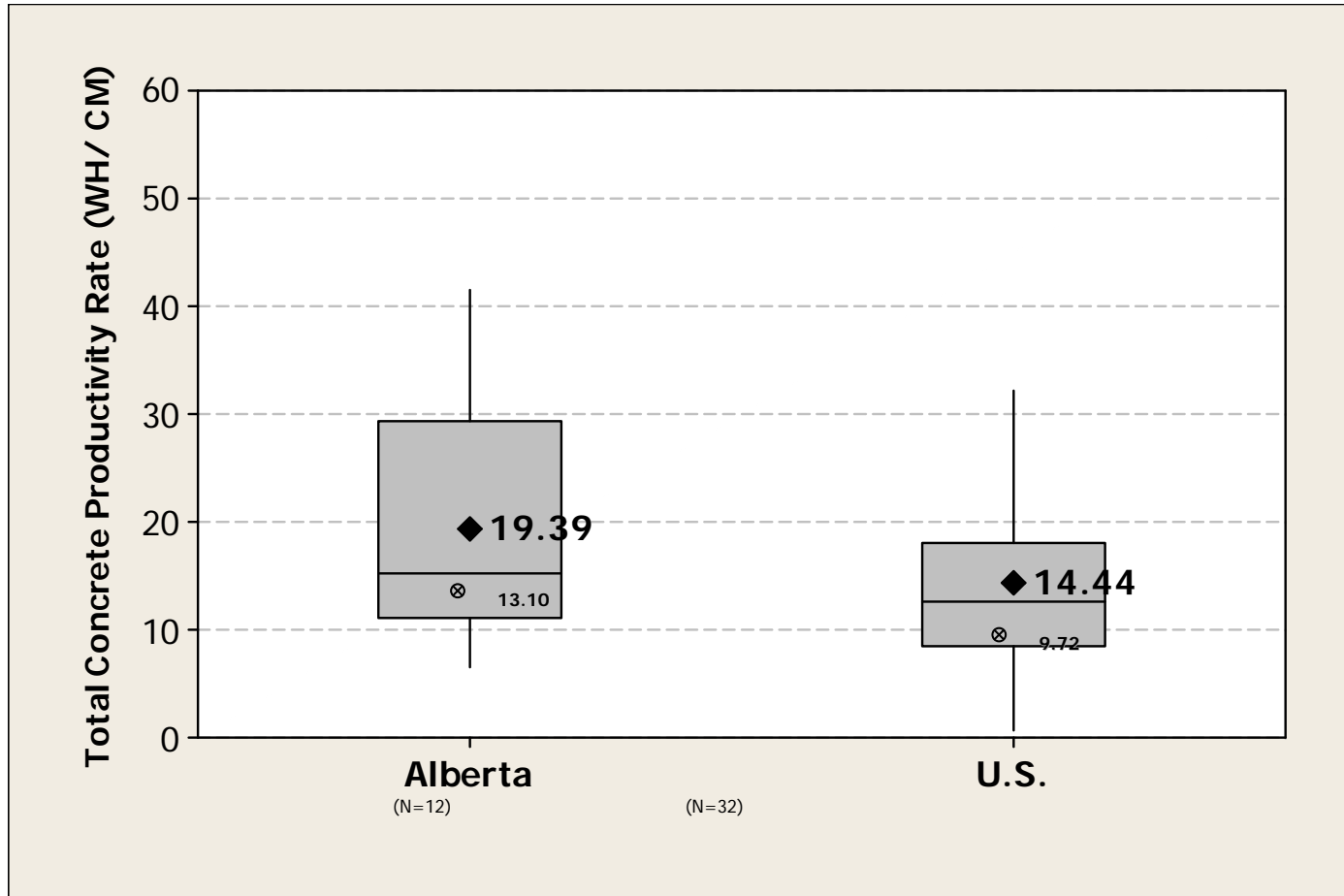


Figure 4-27

Comparison of Total Structural Steel Construction Productivity

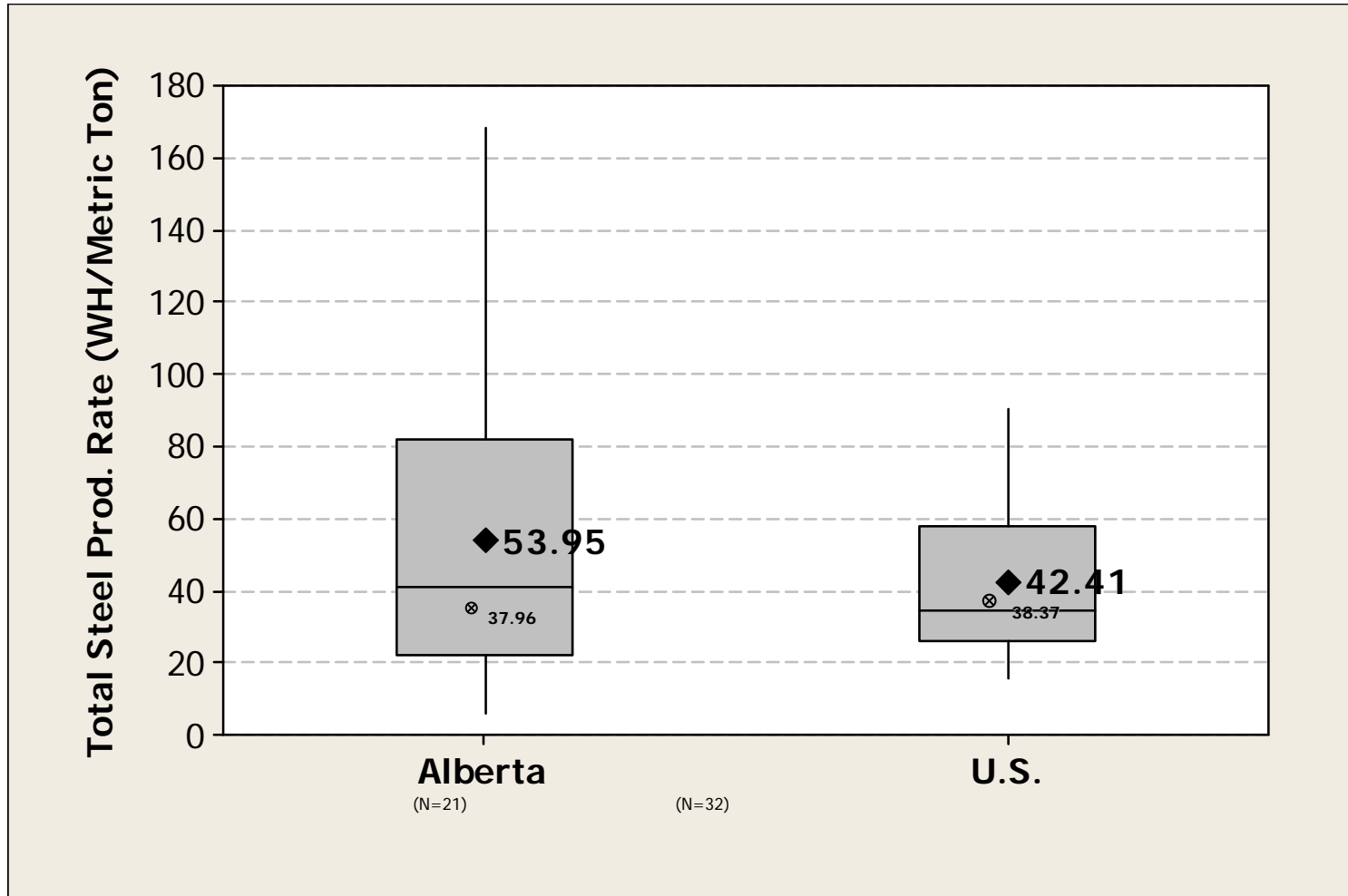


Figure 4-XX

Comparison of Total Piping Construction Productivity

Not enough data to produce results.

More projects required.

Figure 4-XX

Comparison of Total Electrical Construction Productivity

Not enough data to produce results.

More projects required.

Figure 4-28

Instrumentation – Devices Construction Productivity

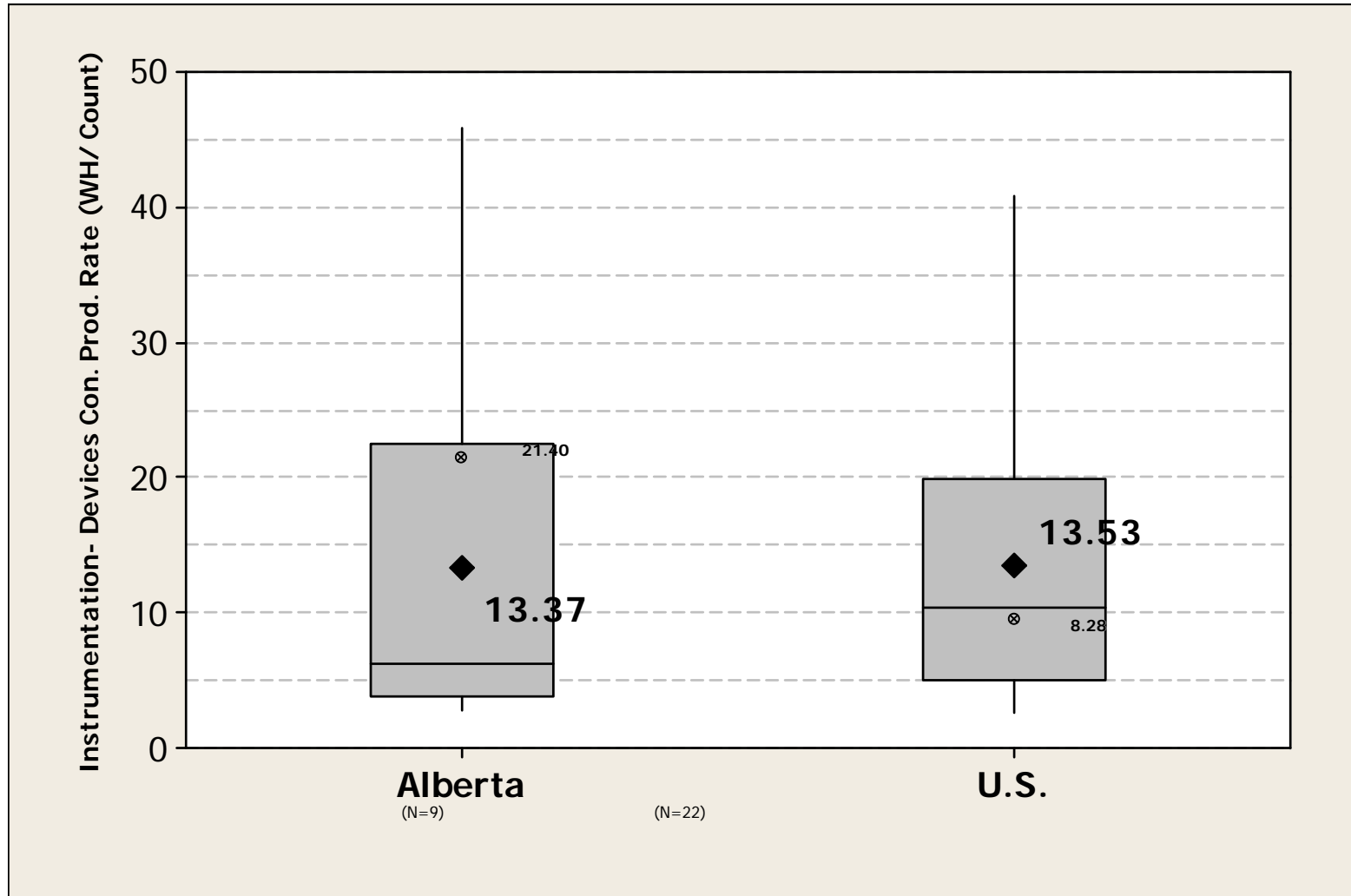


Figure 4-29

Comparison of Insulation- Piping Construction Productivity (WH/ Linear Meter)

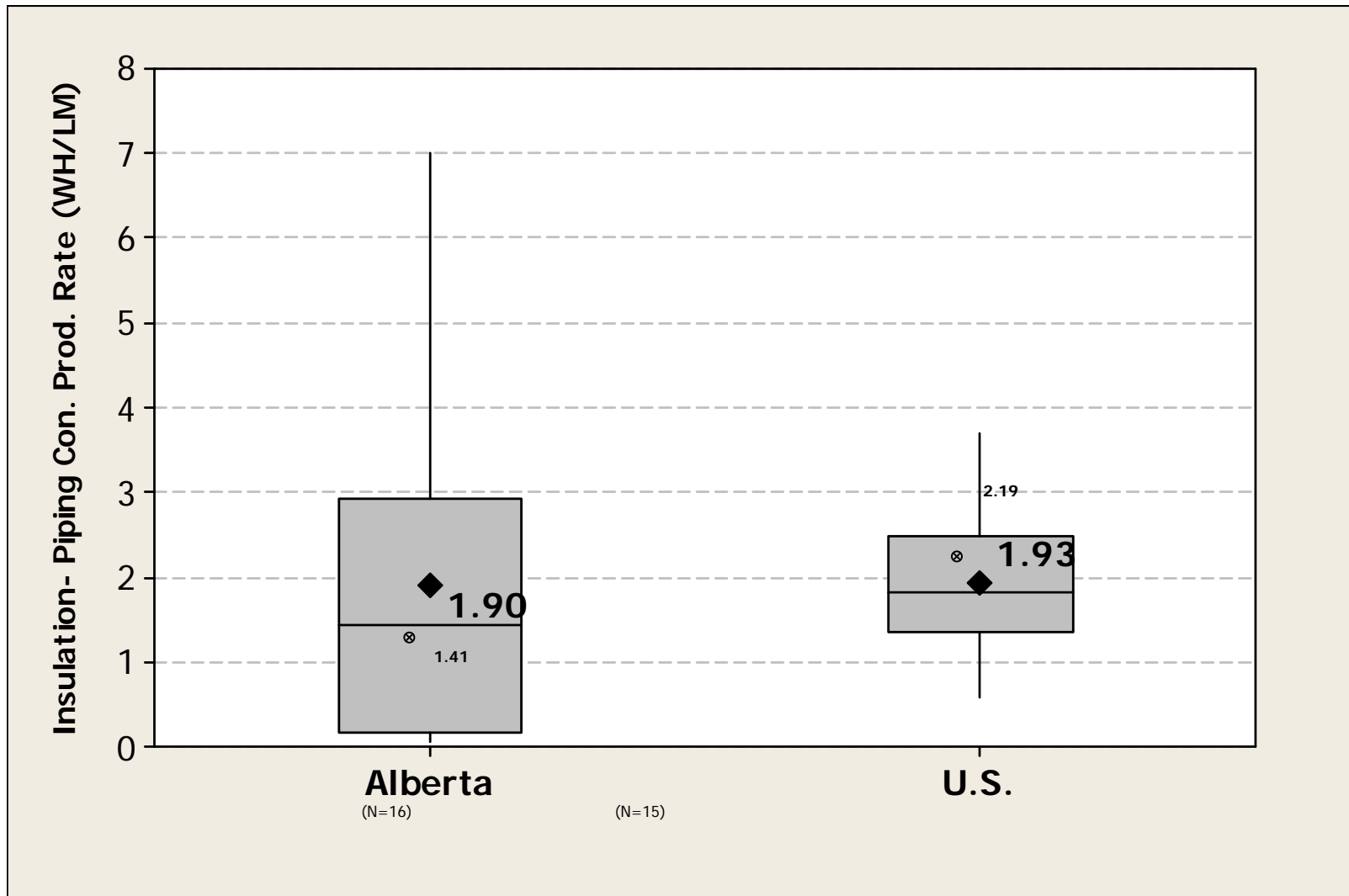
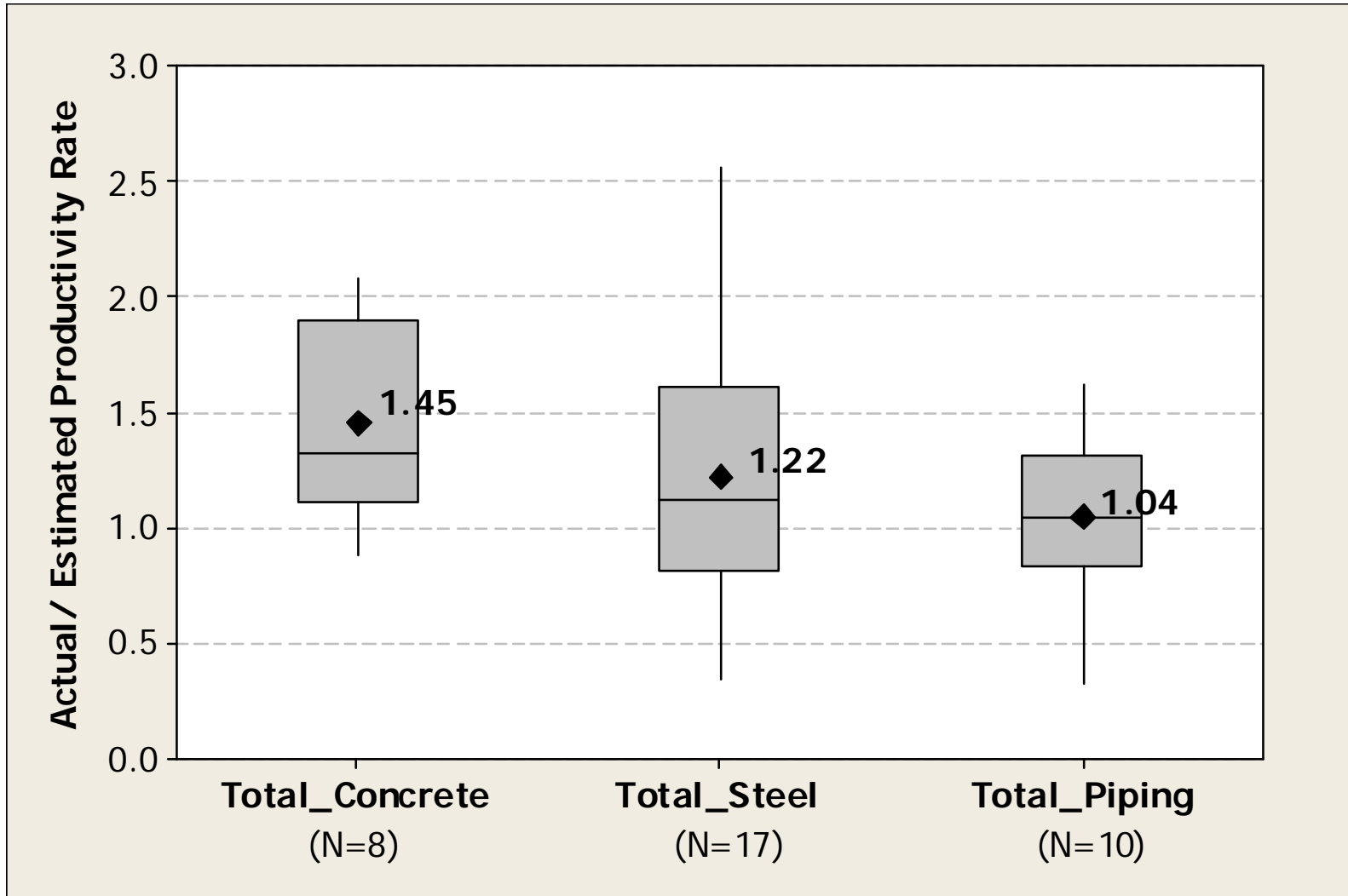
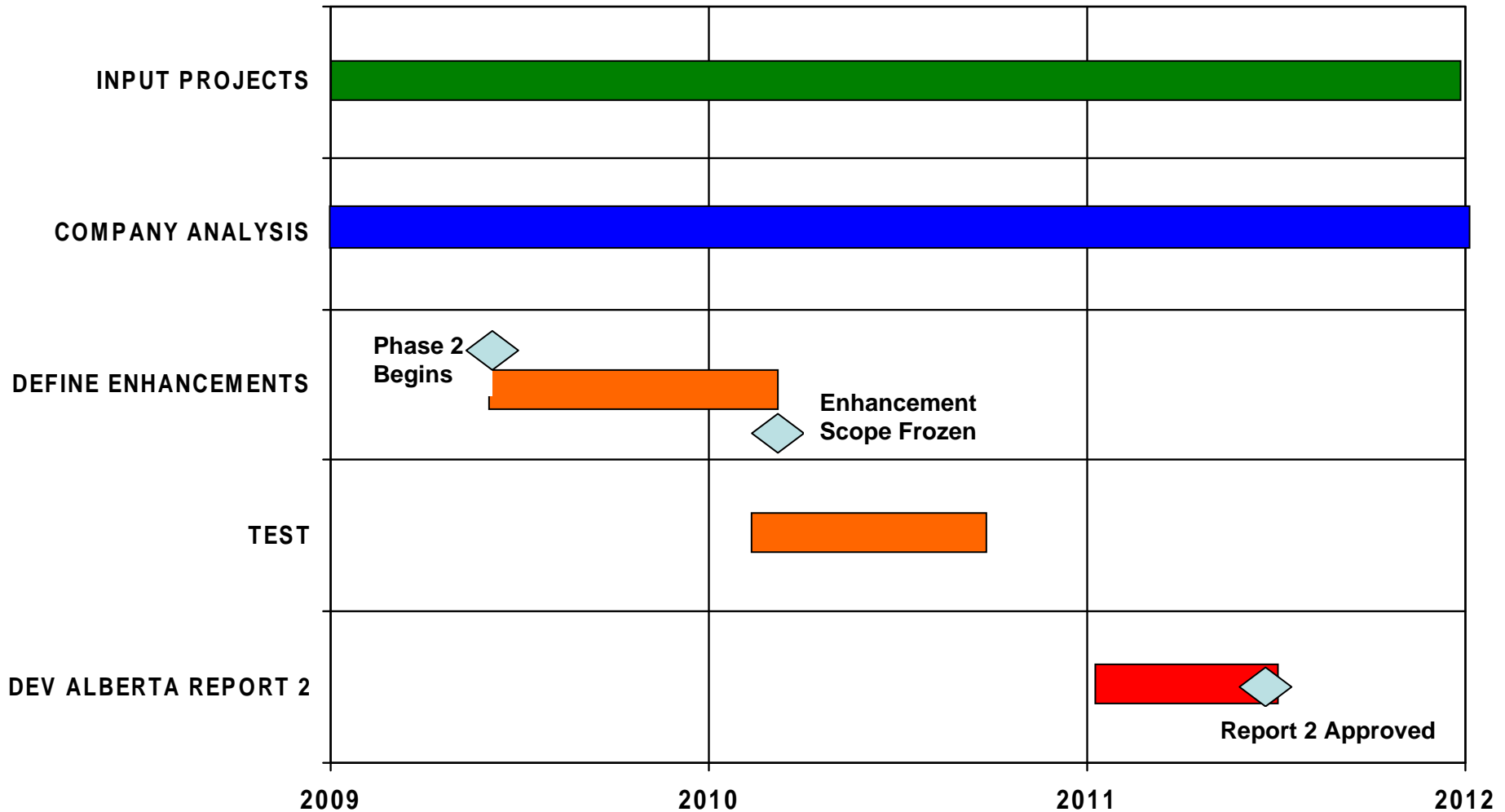


Figure 4-31
Actual / Estimated Construction Productivity Rate by
Work Discipline



Phase II - DRAFT Simplified Schedule



Project Status – 2 year look ahead

	WIP Projects on Hold/Dead	Valid WIP Projects	New Projects
OWNER	11	60	10
CONTRACTOR	7	17	2
TOTAL	18 of 41	77	12

Thank-You

Not enough data to produce results.

More projects required.