

# Models and Heuristics for the Time Driven Resource Loading Problem

Part 2

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# Appendix D

## Tables with computational results

### D.1 Default setting: computational results for specific $t_{bj}$ and specific $T$

## D.1.1 Comparison of the computation times

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
RFTU	Min	-	-	10	10	10	10	10	10	10	-	-	0	10	10	10	10	10	10				
	Max	-	-	20	20	20	30	20	50	20	-	-	20	20	20	20	20	20	40				
	Avg	-	-	11	16	17	18	16	36	15	-	-	10	13	15	14	15	14	30				
OEDD	Min	0	10	10	10	10	10	10	20	-	0	10	10	10	10	10	10	10	20				
	Max	10	21	20	20	20	30	30	50	-	10	20	20	20	20	20	21	20	40				
	Avg	8	15	15	17	15	18	16	33	-	6	13	13	16	14	13	18	18	31				
EJDD	Min	0	10	10	10	10	10	10	20	-	0	10	10	10	10	10	10	10	20				
	Max	10	30	20	30	20	30	31	50	-	11	20	20	21	20	20	30	30	50				
	Avg	6	13	14	16	15	19	17	35	-	7	12	14	16	15	15	17	17	28				
EFMP	Min	0	10	10	10	10	10	10	20	-	0	0	10	10	10	10	10	10	20				
	Max	10	20	20	20	20	21	30	50	-	11	20	21	20	30	20	40	40	-				
	Avg	6	13	14	16	17	18	18	33	-	6	13	13	16	18	17	18	29	-				
EAMP	Min	0	10	10	10	10	10	10	20	-	0	10	10	10	10	10	10	10	20				
	Max	10	20	21	30	20	30	50	50	-	11	20	20	31	30	30	30	40	-				
	Avg	5	14	16	21	17	18	18	32	-	7	13	16	21	17	15	17	30	-				
RFTU	Min	-	-	0	10	10	10	10	20	10	-	-	0	10	10	10	10	10	20				
	Max	-	-	20	20	20	20	20	50	20	-	-	20	20	20	20	20	20	50				
	Avg	-	-	9	16	18	16	17	35	15	-	-	10	15	14	15	14	15	31				
OEDD	Min	0	10	10	10	10	10	10	20	-	0	10	10	10	10	10	10	10	20				
	Max	10	30	20	30	30	21	20	50	-	20	30	20	20	20	21	21	21	50				
	Avg	7	14	15	18	18	17	18	33	-	9	15	13	16	15	17	17	17	29				
EJDD	Min	0	10	10	10	10	10	10	20	-	0	10	10	10	10	10	10	10	20				
	Max	10	30	21	30	30	30	30	80	-	10	30	20	30	30	40	20	70	-				
	Avg	5	14	14	17	18	18	17	43	-	7	13	13	16	17	16	16	38	-				
EFMP	Min	0	10	10	10	10	10	10	20	-	0	10	10	10	10	10	10	10	20				
	Max	20	20	20	30	21	31	30	51	-	20	20	20	30	20	21	21	40	-				
	Avg	9	15	13	18	17	19	18	34	-	8	14	14	17	17	15	16	30	-				
EAMP	Min	0	10	10	10	10	10	10	20	-	0	10	10	10	10	10	10	10	20				
	Max	10	20	21	20	20	30	30	50	-	10	20	20	20	20	30	30	41	-				
	Avg	6	15	13	17	19	18	20	33	-	6	14	15	18	15	17	18	31	-				

Table D.1: Minimum, maximum and average execution times in milliseconds for  $T = 5$

		tbj = 0												tbj = 1											
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU						
RFTU	Min	-	-	10	20	20	20	20	50	20	-	-	10	20	20	20	20	20	40	20					
	Max	-	-	40	50	50	50	50	180	60	-	-	40	50	50	50	50	41	150	50					
	Avg	-	-	24	32	33	33	33	100	31	-	-	23	29	31	30	30	30	81	30					
OEED	Min	0	20	20	20	20	20	20	50	-	0	10	10	20	20	20	20	20	40	-					
	Max	30	461	40	51	40	50	51	191	-	10	51	40	50	50	41	50	50	120	-					
	Avg	9	52	28	33	31	33	31	82	-	8	29	26	30	31	30	32	32	69	-					
EJDD	Min	0	20	10	20	20	20	20	40	-	0	10	10	20	20	20	20	20	40	-					
	Max	10	40	50	50	50	50	51	150	-	10	40	41	50	51	50	50	50	130	-					
	Avg	8	29	28	32	30	31	35	79	-	9	27	28	32	31	30	33	33	69	-					
EFMP	Min	0	20	20	20	20	20	20	40	-	0	20	20	20	20	20	20	20	40	-					
	Max	10	40	40	51	50	50	50	170	-	10	81	40	50	50	50	50	60	130	-					
	Avg	7	29	29	33	35	34	33	78	-	6	31	27	31	33	31	33	33	69	-					
EAMP	Min	0	20	20	20	20	20	20	40	-	0	10	10	20	20	20	20	20	40	-					
	Max	10	50	50	60	50	51	80	160	-	11	40	50	51	50	50	50	50	141	-					
	Avg	7	29	31	35	32	35	36	78	-	7	27	28	34	31	32	33	33	73	-					
RFTU	Min	-	-	10	20	20	20	20	51	20	-	-	10	20	20	20	20	20	40	10					
	Max	-	-	40	50	51	50	50	180	51	-	-	40	50	50	41	40	150	40	40					
	Avg	-	-	24	31	32	31	31	98	31	-	-	24	32	29	30	31	81	27	27					
OEED	Min	0	20	20	20	20	20	20	40	-	0	20	20	20	20	20	20	20	40	-					
	Max	20	41	50	50	50	50	50	160	-	20	50	40	40	50	40	50	50	121	-					
	Avg	8	28	27	34	32	32	32	79	-	6	27	25	31	32	28	33	33	68	-					
EJDD	Min	0	20	20	20	20	20	20	40	-	0	20	20	20	20	20	20	20	40	-					
	Max	30	40	50	50	60	60	50	151	-	10	40	71	40	70	50	50	50	150	-					
	Avg	9	29	29	32	33	33	35	85	-	6	27	28	30	33	32	31	31	77	-					
EFMP	Min	0	20	20	20	20	20	20	40	-	0	20	20	20	20	20	20	20	40	-					
	Max	10	50	40	50	50	50	50	180	-	10	50	50	50	50	41	50	140	-						
	Avg	8	31	29	35	31	33	33	77	-	8	29	30	31	33	32	32	32	70	-					
EAMP	Min	0	20	20	20	20	20	20	40	-	0	20	10	20	20	20	20	20	50	-					
	Max	11	51	40	50	50	60	50	160	-	10	41	40	50	50	51	50	50	130	-					
	Avg	8	31	29	34	33	34	35	77	-	9	28	29	31	32	32	32	32	71	-					

Table D.2: Minimum, maximum and average execution times in milliseconds for  $T = 10$

		tbj = 0												tbj = 1											
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU						
T	RFTU	Min	-	-	30	40	40	40	120	40	-	-	30	40	30	40	40	40	100	30					
		Max	-	-	70	90	90	90	400	90	-	-	71	81	90	101	80	331	81						
		Avg	-	-	49	60	61	61	59	237	59	-	-	47	58	59	58	59	190	53					
T	OEDD	Min	0	40	40	40	40	40	80	-	0	40	30	40	40	40	40	40	80	-					
		Max	10	81	90	90	90	90	361	-	11	80	80	81	90	90	90	90	251	-					
		Avg	10	55	56	58	59	60	173	-	9	56	54	57	60	60	61	150	-						
T	EJDD	Min	0	40	30	40	40	40	90	-	0	40	30	40	40	40	40	40	80	-					
		Max	10	80	80	90	90	101	380	-	10	81	90	90	90	90	81	340	260	-					
		Avg	9	57	56	60	60	63	172	-	9	56	54	59	57	60	74	144	-						
T	EFMP	Min	0	40	40	40	40	40	90	-	0	40	40	40	40	40	40	40	80	-					
		Max	20	80	80	91	90	90	380	-	10	81	80	90	91	90	90	90	270	-					
		Avg	10	54	58	61	63	61	175	-	8	56	57	60	61	60	59	143	-						
T	EAMP	Min	0	30	40	40	40	40	91	-	0	30	40	40	40	40	40	40	91	-					
		Max	10	90	90	91	100	91	381	-	10	90	90	90	90	90	100	260	-						
		Avg	9	57	57	65	64	64	172	-	9	58	58	62	61	61	63	148	-						
NT	RFTU	Min	-	-	30	40	40	40	120	30	-	-	30	40	40	40	40	40	100	30					
		Max	-	-	71	90	80	91	421	90	-	-	70	81	80	90	80	360	80						
		Avg	-	-	47	58	58	60	230	57	-	-	47	55	54	56	58	186	53						
NT	OEDD	Min	0	30	30	40	40	40	80	-	0	30	40	40	30	40	40	40	80	-					
		Max	20	90	80	90	80	91	381	-	20	80	80	80	81	81	100	281	-						
		Avg	10	55	54	60	59	61	163	-	11	54	53	56	56	57	59	142	-						
NT	EJDD	Min	0	30	40	40	40	40	100	-	10	30	30	40	40	40	40	40	80	-					
		Max	10	80	80	90	90	90	351	-	11	90	80	90	100	90	91	271	-						
		Avg	8	56	57	58	59	62	177	-	10	54	53	56	59	58	57	148	-						
NT	EFMP	Min	0	40	30	40	40	40	90	-	0	40	40	40	40	40	40	40	81	-					
		Max	20	90	80	220	90	90	350	-	20	101	80	91	90	90	80	280	-						
		Avg	10	56	55	69	59	61	172	-	11	56	55	58	57	57	58	139	-						
NT	EAMP	Min	10	40	40	40	40	40	90	-	10	40	40	40	40	40	40	40	90	-					
		Max	21	80	80	90	90	90	350	-	20	80	90	80	90	91	90	270	-						
		Avg	11	57	57	61	61	63	155	-	12	56	55	58	58	61	59	142	-						

Table D.3: Minimum, maximum and average execution times in milliseconds for  $T = 15$

		t <sub>bj</sub> = 0											t <sub>bj</sub> = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
T	RFTU	Min	-	-	50	60	60	70	230	60	-	-	50	60	60	60	60	60	180	60			
		Max	-	-	141	150	161	150	181	911	150	-	-	140	160	150	151	150	150	711	150		
		Avg	-	-	92	110	107	107	110	529	107	-	-	90	103	104	104	105	392	103			
	OEDD	Min	10	60	70	60	70	60	70	150	-	10	50	50	60	70	60	60	60	140	-		
		Max	20	150	200	150	150	160	151	741	-	10	140	151	160	150	170	151	500	-			
		Avg	11	103	104	108	105	105	108	337	-	10	101	99	103	103	103	103	285	-			
	EJDD	Min	10	61	70	60	60	70	60	140	-	0	50	50	60	61	61	70	150	-			
		Max	20	190	141	160	160	160	160	661	-	21	150	150	160	150	160	160	531	-			
		Avg	11	105	102	108	106	109	110	334	-	10	99	100	103	103	105	110	279	-			
EFMP	Min	0	60	60	70	60	60	70	150	-	0	60	60	60	61	60	61	60	140	-			
	Max	20	141	160	151	160	160	151	792	-	20	150	151	160	160	161	180	511	-				
	Avg	10	101	105	109	110	108	110	385	-	10	101	103	104	105	105	107	289	-				
EAMP	Min	10	61	61	70	60	60	70	140	-	0	60	60	60	70	60	71	130	-				
	Max	20	150	150	160	161	160	180	651	-	20	151	151	170	160	160	170	531	-				
	Avg	12	105	105	114	111	111	112	335	-	10	102	101	110	108	107	109	292	-				
RFTU	Min	-	-	50	61	70	70	60	260	60	-	-	50	60	60	60	60	180	60				
	Max	-	-	130	150	151	160	150	891	150	-	-	141	150	150	150	151	731	150				
	Avg	-	-	88	105	107	107	106	526	104	-	-	90	100	101	102	102	401	99				
OEDD	Min	0	60	60	70	70	70	61	150	-	0	60	60	70	60	60	60	140	-				
	Max	20	161	140	151	150	150	160	701	-	30	150	150	160	151	150	150	521	-				
	Avg	11	100	99	106	103	104	105	325	-	13	99	97	102	101	103	105	279	-				
EJDD	Min	0	61	60	70	60	70	70	170	-	10	60	60	60	60	60	60	170	-				
	Max	20	180	150	160	151	160	160	752	-	20	150	150	150	181	160	150	550	-				
	Avg	11	102	99	107	109	106	105	344	-	12	100	100	102	105	105	103	280	-				
EFMP	Min	0	60	60	60	60	60	70	150	-	0	60	60	70	70	70	60	130	-				
	Max	20	150	150	150	160	161	151	781	-	20	150	150	150	151	160	150	521	-				
	Avg	12	101	102	107	107	109	108	381	-	12	102	102	105	103	104	102	284	-				
EAMP	Min	10	70	70	60	60	60	60	140	-	10	60	60	60	60	60	60	130	-				
	Max	21	150	151	170	160	160	161	651	-	20	151	151	161	150	160	181	481	-				
	Avg	12	104	105	108	108	109	110	332	-	13	102	100	105	104	104	108	273	-				

Table D.4: Minimum, maximum and average execution times in milliseconds for  $T = 20$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
RFTU	Min	-	-	100	110	110	121	110	541	111	-	-	90	110	111	110	111	351	100				
	Max	-	-	201	231	241	231	231	1573	230	-	-	210	221	230	231	230	1191	230				
	Avg	-	-	156	175	175	176	175	1012	175	-	-	153	173	171	171	173	725	171				
OEDD	Min	10	110	110	110	111	110	110	281	-	10	100	100	110	100	110	110	101	280	-			
	Max	20	250	220	230	230	230	231	1322	-	10	270	231	230	220	231	231	961	-				
	Avg	11	172	166	173	172	174	173	585	-	10	181	165	170	171	171	174	500	-				
EJDD	Min	10	100	100	110	110	110	110	250	-	10	100	100	110	110	110	110	110	261	-			
	Max	20	281	220	231	240	240	260	1292	-	20	230	220	240	240	241	241	811	-				
	Avg	12	169	165	177	176	179	179	630	-	13	167	163	173	175	175	174	498	-				
EFMP	Min	10	110	110	110	110	110	110	341	-	0	101	100	110	101	110	100	261	-				
	Max	20	231	231	241	240	241	241	1151	-	20	250	240	230	240	241	270	881	-				
	Avg	12	167	170	176	180	179	178	670	-	11	169	168	173	174	174	178	510	-				
EAMP	Min	0	100	110	110	120	110	120	310	-	0	100	110	110	110	110	110	261	-				
	Max	20	230	231	441	251	241	260	1312	-	20	231	230	241	240	230	261	781	-				
	Avg	13	170	173	197	182	180	184	679	-	12	167	169	176	175	177	177	486	-				
RFTU	Min	-	-	100	110	110	110	110	541	110	-	-	90	110	101	100	110	351	110				
	Max	-	-	210	241	230	231	250	1543	230	-	-	201	221	220	230	221	1121	230				
	Avg	-	-	152	173	172	175	173	979	168	-	-	150	166	166	166	168	690	166				
OEDD	Min	10	110	100	110	111	110	120	290	-	10	100	100	110	110	100	120	260	-				
	Max	30	221	221	231	250	230	281	1172	-	31	221	230	230	231	230	270	1001	-				
	Avg	14	164	163	171	169	172	177	565	-	14	163	163	169	166	169	170	498	-				
EJDD	Min	10	110	100	111	110	111	110	271	-	0	100	110	100	110	110	111	301	-				
	Max	21	221	231	230	260	241	240	1171	-	20	240	230	230	240	230	240	771	-				
	Avg	14	165	165	171	175	175	171	612	-	14	169	163	166	171	168	172	492	-				
EFMP	Min	10	101	100	110	110	110	120	341	-	10	110	100	120	110	100	110	260	-				
	Max	20	230	260	231	230	241	240	1192	-	20	230	231	390	231	221	231	801	-				
	Avg	13	167	174	173	173	174	173	680	-	14	167	166	186	168	169	171	499	-				
EAMP	Min	10	120	110	110	110	120	120	311	-	10	110	110	110	110	100	101	271	-				
	Max	30	231	231	240	240	231	241	1202	-	20	241	230	231	231	341	231	711	-				
	Avg	17	171	169	176	177	176	177	653	-	15	169	165	171	171	177	171	476	-				

Table D.5: Minimum, maximum and average execution times in milliseconds for  $T = 25$



		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
T	RFTU	Min	-	-	150	171	170	180	170	942	180	-	-	150	170	170	160	170	581	170			
		Max	-	-	301	341	330	331	380	2283	331	-	-	301	330	321	330	351	1632	331			
		Avg	-	-	234	262	260	261	263	1611	262	-	-	232	253	253	254	257	1139	258			
	OEDD	Min	10	170	160	170	170	171	180	441	-	10	160	170	160	170	170	170	431	-			
		Max	20	441	330	321	331	330	340	1372	-	20	400	320	321	330	331	321	1131	-			
		Avg	12	266	247	254	259	257	261	862	-	12	257	249	251	253	252	253	765	-			
	EJDD	Min	10	170	170	170	170	180	170	401	-	10	161	160	170	170	170	170	421	-			
		Max	20	321	321	330	331	341	370	1442	-	20	330	320	321	320	370	341	1282	-			
		Avg	14	249	250	259	258	266	267	897	-	13	250	249	253	254	258	261	749	-			
EFMP	Min	10	171	161	171	170	170	180	511	-	10	170	170	170	170	160	170	441	-				
	Max	20	331	330	350	331	331	331	1753	-	20	321	330	321	321	340	390	1101	-				
	Avg	12	249	250	262	265	267	267	1090	-	12	251	251	253	256	259	263	763	-				
EAMP	Min	10	170	170	190	180	180	190	531	-	10	170	170	170	171	170	170	421	-				
	Max	21	331	361	430	351	340	351	1862	-	20	330	320	360	330	331	330	1122	-				
	Avg	15	254	258	280	272	266	272	1061	-	13	252	251	264	258	261	261	751	-				
RFTU	Min	-	-	160	170	170	170	170	932	180	-	-	150	161	170	160	180	591	160				
	Max	-	-	300	321	321	321	321	2464	321	-	-	291	320	321	330	320	1603	331				
	Avg	-	-	229	257	255	258	253	1620	255	-	-	229	247	251	250	249	1106	248				
OEDD	Min	10	160	160	171	170	180	171	410	-	10	160	160	170	170	160	171	441	-				
	Max	30	310	311	340	330	321	340	1362	-	30	311	311	321	320	320	320	1102	-				
	Avg	14	245	242	256	253	253	258	838	-	15	246	243	250	251	250	252	731	-				
EJDD	Min	10	170	160	180	170	170	180	410	-	10	171	160	170	171	170	170	431	-				
	Max	20	321	340	321	351	330	330	1712	-	20	351	341	321	361	330	321	1202	-				
	Avg	14	249	247	253	258	259	256	926	-	15	259	249	251	258	254	252	758	-				
EFMP	Min	10	160	160	171	171	171	180	511	-	10	171	170	170	171	170	171	441	-				
	Max	20	330	321	331	331	331	331	1702	-	30	320	351	321	320	321	320	1192	-				
	Avg	17	253	250	263	261	261	261	1066	-	17	252	248	253	250	252	251	755	-				
EAMP	Min	10	170	180	170	181	180	170	541	-	10	170	160	171	170	170	160	421	-				
	Max	31	340	321	331	341	351	341	1843	-	30	321	321	320	331	321	330	1082	-				
	Avg	19	251	252	262	264	266	263	1078	-	17	255	249	252	253	253	255	741	-				

Table D.6: Minimum, maximum and average execution times in milliseconds for  $T = 30$



Table D.7: Objective values compared to objective value of TBP30 method for  $T = 5$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
RFTU	Equal	-	-	0	0	0	0	0	1	0	-	-	0	0	0	0	0	0	0				
	Avg Diff	-	-	1518	489	610	427	617	292	381	-	-	1522	724	706	684	777	513	668				
	Avg % Diff	-	-	91.8	86.8	88.6	86.5	88.7	80.2	86.3	-	-	91.7	89.0	89.1	89.0	89.8	87.8	88.9				
OEDD	Equal	4	4	4	4	4	4	4	4	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	296	287	285	258	252	253	252	252	-	594	581	581	534	535	536	535	534	-				
	Avg % Diff	67.9	67.6	67.6	66.8	66.5	66.6	66.5	66.5	-	89.0	88.8	88.8	88.5	88.5	88.5	88.5	88.5	-				
EJDD	Equal	6	6	6	6	6	6	6	6	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	277	266	265	249	231	235	238	231	-	567	553	553	542	536	536	540	536	-				
	Avg % Diff	58.5	58.2	58.2	57.7	57.2	57.4	57.4	57.2	-	88.9	88.8	88.8	88.5	88.4	88.4	88.5	88.4	-				
EFMP	Equal	3	4	4	5	5	5	5	5	-	0	0	0	1	1	1	1	1	-				
	Avg Diff	265	241	239	222	200	201	221	199	-	548	530	526	516	507	507	513	507	-				
	Avg % Diff	72.5	67.2	67.1	61.8	61.1	61.1	61.8	61.0	-	88.8	88.6	88.5	83.6	83.5	83.5	83.6	83.5	-				
EAMP	Equal	3	3	3	3	3	3	3	3	-	0	0	0	1	1	1	1	1	-				
	Avg Diff	265	253	250	231	219	216	225	218	-	546	533	531	520	513	513	520	513	-				
	Avg % Diff	72.6	72.3	72.2	71.7	71.2	71.1	71.5	71.2	-	88.8	88.7	88.6	83.6	83.5	83.5	83.6	83.5	-				
RFTU	Equal	-	-	0	0	0	0	0	1	0	-	-	0	0	0	0	0	0	0				
	Avg Diff	-	-	1570	522	635	433	664	328	377	-	-	1522	718	720	695	786	515	676				
	Avg % Diff	-	-	91.9	86.8	88.6	86.5	88.7	80.2	86.2	-	-	91.6	89.0	89.1	89.0	89.8	87.8	88.9				
OEDD	Equal	5	5	5	5	5	5	5	5	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	289	278	276	252	246	247	246	246	-	598	584	584	540	541	541	541	539	-				
	Avg % Diff	63.1	62.8	62.8	62.0	61.7	61.8	61.7	61.7	-	89.0	88.8	88.8	88.5	88.5	88.5	88.5	88.5	-				
EJDD	Equal	6	6	6	6	6	6	6	6	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	274	264	263	248	230	233	237	230	-	565	548	548	537	531	531	535	531	-				
	Avg % Diff	58.5	58.2	58.2	57.7	57.2	57.4	57.4	57.2	-	88.9	88.7	88.7	88.5	88.4	88.4	88.5	88.4	-				
EFMP	Equal	3	4	4	5	5	5	5	5	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	269	246	243	226	206	207	226	205	-	549	532	527	513	508	508	513	508	-				
	Avg % Diff	72.4	67.2	67.1	61.8	61.1	61.1	61.8	61.0	-	88.8	88.6	88.5	88.3	88.2	88.2	88.3	88.2	-				
EAMP	Equal	3	3	3	4	4	4	4	4	-	0	0	0	1	1	1	1	1	-				
	Avg Diff	259	245	242	223	208	205	217	206	-	543	531	526	515	510	510	515	510	-				
	Avg % Diff	72.6	72.3	72.2	66.9	66.2	66.2	66.6	66.2	-	88.8	88.6	88.6	83.6	83.5	83.5	83.6	83.5	-				

Table D.8: Objective values compared to objective value of TBP30 method for  $T = 10$

		t <sub>bj</sub> = 0										t <sub>bj</sub> = 1									
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU		
T	Equal	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0		
	Avg Diff	-	-	2296	762	829	633	899	486	605	-	-	2240	1141	1113	1104	1216	847	1086		
	Avg % Diff	-	-	92.5	87.6	89.8	87.9	89.6	86.4	88.0	-	-	92.1	89.5	89.6	89.3	89.9	88.0	89.2		
	Equal	1	1	1	1	1	1	1	1	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	386	365	365	325	322	322	323	322	-	980	934	934	858	865	865	862	857	-		
	Avg % Diff	81.9	81.3	81.3	80.3	80.2	80.2	80.3	80.2	-	89.4	89.2	89.2	88.9	88.9	88.9	88.9	88.9	-		
	Equal	3	3	3	3	3	3	3	3	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	386	383	382	349	329	331	341	329	-	918	891	891	869	859	861	860	858	-		
	Avg % Diff	72.6	72.5	72.5	71.5	71.0	71.1	71.3	71.0	-	89.0	88.8	88.8	88.6	88.5	88.5	88.5	88.5	-		
	Equal	2	3	3	3	3	3	3	3	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	426	394	393	368	345	344	367	341	-	881	864	863	849	839	839	849	835	-		
	Avg % Diff	78.1	72.6	72.6	72.2	71.6	71.6	72.2	71.5	-	89.1	88.9	88.9	88.8	88.8	88.8	88.8	88.9	88.7		
	Equal	2	2	2	2	2	2	2	2	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	348	330	329	309	287	286	304	284	-	908	884	883	861	846	846	854	846	-		
	Avg % Diff	76.6	76.2	76.1	75.7	74.7	74.6	75.4	74.6	-	89.1	88.9	88.9	88.8	88.7	88.7	88.8	88.7	-		
Equal	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0			
Avg Diff	-	-	2375	802	850	634	963	474	602	-	-	2199	1120	1106	1086	1220	844	1067			
Avg % Diff	-	-	92.6	88.0	89.7	87.9	89.7	86.1	88.0	-	-	92.1	89.3	89.6	89.2	90.0	88.0	89.0			
NT	Equal	1	1	1	1	1	1	1	1	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	391	373	372	338	330	330	336	329	-	988	943	942	859	863	862	861	859	-		
	Avg % Diff	81.9	81.5	81.5	80.6	80.5	80.5	80.6	80.4	-	89.4	89.1	89.1	88.7	88.7	88.7	88.7	88.7	-		
	Equal	3	3	3	3	3	3	3	3	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	376	371	370	334	318	323	330	318	-	922	898	898	875	869	871	870	867	-		
	Avg % Diff	72.5	72.4	72.4	71.3	70.9	71.1	71.3	70.9	-	89.2	89.0	89.0	88.8	88.7	88.8	88.8	88.7	-		
	Equal	2	3	3	3	3	3	3	3	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	434	404	402	374	355	356	374	350	-	875	858	857	841	830	830	840	826	-		
	Avg % Diff	77.9	72.7	72.6	72.1	71.7	71.6	72.1	71.5	-	89.1	88.9	88.9	88.8	88.8	88.8	88.8	88.9	88.7		
	Equal	2	2	2	2	2	2	2	2	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	354	334	331	307	292	291	305	289	-	883	865	863	847	832	831	840	831	-		
	Avg % Diff	76.9	76.4	76.3	75.7	75.1	75.1	75.5	75.1	-	89.1	88.9	88.9	88.8	88.7	88.7	88.8	88.8	88.7		

Table D.9: Objective values compared to objective value of TBP30 method for  $T = 15$

		tbj = 0										tbj = 1									
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU		
T	Equal	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0		
	Avg Diff	-	-	3383	1189	1185	1016	1440	792	983	-	-	3285	1672	1619	1611	1787	1251	1588		
	Avg % Diff	-	-	92.4	88.1	89.1	88.1	89.6	86.7	88.1	-	-	89.8	85.7	85.4	85.2	86.3	83.2	85.2		
T	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	686	650	650	611	605	607	611	604	-	1545	1490	1487	1391	1399	1399	1394	1388	-		
	Avg % Diff	86.0	85.5	85.5	84.7	84.6	84.7	84.7	84.6	-	85.9	85.5	85.4	84.9	84.9	84.9	84.9	84.8	-		
T	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	651	634	633	600	542	554	575	542	-	1385	1350	1348	1309	1295	1300	1305	1292	-		
	Avg % Diff	85.6	85.5	85.5	85.1	84.7	84.7	84.8	84.7	-	85.0	84.7	84.7	84.3	84.3	84.3	84.3	84.2	-		
T	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	575	545	533	496	434	445	488	428	-	1380	1340	1335	1298	1281	1278	1298	1275	-		
	Avg % Diff	85.7	85.4	85.2	84.6	83.0	83.3	84.3	82.9	-	85.4	85.1	85.1	84.7	84.7	84.7	84.8	84.6	-		
T	Equal	1	1	1	1	1	1	1	1	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	574	538	527	494	470	472	487	466	-	1332	1294	1290	1255	1242	1242	1254	1241	-		
	Avg % Diff	81.1	80.5	80.2	79.9	79.1	79.2	79.6	79.0	-	85.0	84.7	84.7	84.4	84.3	84.3	84.4	84.3	-		
NT	Equal	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0		
	Avg Diff	-	-	3443	1203	1210	1025	1477	794	986	-	-	3282	1660	1628	1618	1790	1260	1587		
	Avg % Diff	-	-	92.4	88.2	89.1	88.1	89.7	86.6	88.1	-	-	89.8	85.6	85.6	85.4	86.3	83.2	85.2		
NT	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	687	648	647	606	601	603	606	600	-	1546	1493	1490	1395	1402	1402	1397	1392	-		
	Avg % Diff	86.2	85.7	85.7	84.9	84.8	84.8	84.9	84.8	-	85.9	85.5	85.5	84.9	84.9	84.9	84.9	84.9	-		
NT	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	615	592	591	565	514	525	538	513	-	1377	1341	1339	1303	1291	1295	1300	1289	-		
	Avg % Diff	85.2	85.1	85.1	84.7	84.1	84.2	84.4	84.1	-	85.0	84.7	84.7	84.3	84.2	84.3	84.3	84.2	-		
NT	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	596	553	543	498	441	449	488	436	-	1360	1327	1323	1283	1269	1268	1281	1263	-		
	Avg % Diff	85.7	85.4	85.3	84.5	83.0	83.3	84.2	82.9	-	85.3	85.0	85.0	84.6	84.6	84.5	84.6	84.5	-		
NT	Equal	1	1	1	1	1	1	1	1	-	0	0	0	0	0	0	0	0	-		
	Avg Diff	554	521	510	480	452	456	465	449	-	1324	1284	1281	1251	1233	1233	1246	1231	-		
	Avg % Diff	80.7	80.2	80.0	79.7	78.7	78.9	79.2	78.7	-	85.0	84.7	84.7	84.4	84.2	84.2	84.4	84.2	-		

Table D.10: Objective values compared to objective value of TBP30 method for  $T = 20$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
T	Equal	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0				
	Avg Diff	-	-	4349	1505	1589	1392	1939	1049	1355	-	-	4140	2186	2169	2162	2320	1722	2146				
	Avg % Diff	-	-	91.2	85.3	85.8	84.8	87.4	82.4	84.8	-	-	87.1	82.0	81.8	81.7	82.7	79.4	81.7				
	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	1055	1012	1004	949	947	948	950	947	-	2052	1959	1957	1859	1851	1850	1849	1844	-				
	Avg % Diff	82.7	82.0	81.9	81.4	81.4	81.4	81.4	81.4	-	81.8	81.2	81.2	80.6	80.5	80.5	80.5	80.5	-				
	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	1003	1004	1003	936	879	898	904	879	-	1875	1850	1849	1798	1774	1784	1782	1771	-				
	Avg % Diff	81.7	81.8	81.8	81.2	80.0	80.4	80.6	80.0	-	81.1	80.9	80.9	80.5	80.3	80.4	80.4	80.3	-				
	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	873	836	827	764	685	693	755	678	-	1891	1843	1835	1769	1747	1744	1766	1744	-				
	Avg % Diff	81.7	81.2	81.1	80.1	79.0	79.1	80.0	78.8	-	81.3	81.0	80.9	80.5	80.3	80.3	80.4	80.3	-				
	Equal	0	0	0	0	1	1	0	1	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	828	783	769	729	654	660	693	650	-	1878	1824	1820	1769	1753	1754	1766	1748	-				
	Avg % Diff	81.1	80.4	80.2	79.5	72.9	73.0	78.8	72.8	-	81.2	80.8	80.8	80.4	80.3	80.3	80.4	80.3	-				
Equal	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0					
Avg Diff	-	-	4414	1547	1606	1401	1939	1054	1347	-	-	4106	2181	2164	2156	2339	1715	2129					
Avg % Diff	-	-	91.3	85.5	85.9	84.7	87.4	82.3	84.7	-	-	87.0	81.9	81.8	81.6	82.8	79.4	81.6					
Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-					
Avg Diff	1038	994	991	936	935	935	936	934	-	2077	1967	1966	1864	1858	1857	1856	1848	-					
Avg % Diff	82.4	81.8	81.7	81.2	81.2	81.2	81.2	81.2	-	81.9	81.3	81.3	80.6	80.6	80.6	80.6	80.5	-					
Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-					
Avg Diff	974	978	977	903	843	857	875	843	-	1879	1858	1855	1806	1780	1789	1792	1776	-					
Avg % Diff	81.5	81.5	81.5	80.8	79.5	79.9	80.1	79.5	-	81.1	81.0	80.9	80.6	80.4	80.4	80.5	80.4	-					
Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-					
Avg Diff	870	834	821	756	676	686	745	670	-	1886	1836	1825	1761	1749	1748	1759	1745	-					
Avg % Diff	81.5	81.0	80.9	79.8	78.7	78.8	79.7	78.5	-	81.2	80.9	80.8	80.4	80.3	80.3	80.3	80.2	-					
Equal	0	0	1	1	2	2	1	2	-	0	0	0	0	0	0	0	0	-					
Avg Diff	823	779	761	720	655	660	683	654	-	1866	1807	1805	1756	1738	1739	1753	1734	-					
Avg % Diff	81.2	80.5	75.3	74.5	68.2	68.2	73.8	68.1	-	81.1	80.6	80.6	80.3	80.2	80.2	80.3	80.1	-					

Table D.11: Objective values compared to objective value of TBP30 method for  $T = 25$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
T	Equal	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0				
	Avg Diff	-	-	5148	1766	1902	1708	2390	1295	1638	-	-	5001	2607	2619	2562	2808	2046	2539				
	Avg % Diff	-	-	90.0	84.1	84.6	83.8	86.2	81.5	83.6	-	-	86.4	81.1	81.1	80.9	81.9	78.6	80.8				
T	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	1184	1142	1139	1035	1026	1027	1029	1026	-	2513	2406	2399	2251	2267	2266	2254	2248	-				
	Avg % Diff	80.0	79.5	79.4	78.5	78.3	78.3	78.4	78.3	-	81.0	80.5	80.5	79.7	79.7	79.7	79.7	79.7	-				
T	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	1112	1103	1102	1013	975	989	987	975	-	2231	2188	2187	2110	2095	2104	2098	2090	-				
	Avg % Diff	79.1	79.1	79.1	78.2	77.7	77.8	77.8	77.7	-	79.9	79.7	79.7	79.2	79.0	79.1	79.1	79.0	-				
T	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	1005	956	947	858	776	775	843	772	-	2230	2166	2151	2061	2030	2032	2053	2025	-				
	Avg % Diff	79.8	79.2	79.1	78.0	76.6	76.6	77.9	76.5	-	79.8	79.4	79.4	78.8	78.6	78.6	78.7	78.5	-				
T	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	978	911	900	816	744	755	796	736	-	2234	2158	2141	2079	2053	2057	2066	2049	-				
	Avg % Diff	78.9	77.7	77.5	75.8	74.7	74.9	75.5	74.3	-	79.8	79.4	79.3	78.9	78.7	78.7	78.8	78.7	-				
NT	Equal	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0				
	Avg Diff	-	-	5186	1774	1918	1697	2389	1288	1624	-	-	4978	2577	2637	2582	2815	2032	2553				
	Avg % Diff	-	-	90.1	84.0	84.8	83.8	86.2	81.3	83.6	-	-	86.4	80.9	81.2	81.0	82.0	78.5	80.8				
NT	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	1173	1130	1128	1026	1020	1022	1023	1020	-	2499	2395	2388	2243	2258	2257	2246	2242	-				
	Avg % Diff	79.9	79.3	79.3	78.3	78.2	78.3	78.3	78.2	-	80.9	80.5	80.4	79.6	79.7	79.7	79.6	79.6	-				
NT	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	1085	1070	1070	984	948	957	960	948	-	2238	2194	2191	2114	2097	2105	2100	2093	-				
	Avg % Diff	78.8	78.7	78.7	77.8	77.3	77.5	77.5	77.3	-	80.0	79.7	79.7	79.2	79.1	79.1	79.1	79.1	-				
NT	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	1016	971	960	869	806	804	860	802	-	2224	2164	2155	2062	2030	2034	2056	2025	-				
	Avg % Diff	79.7	79.2	79.1	78.0	76.8	76.8	77.9	76.7	-	79.8	79.5	79.4	78.8	78.6	78.6	78.8	78.6	-				
NT	Equal	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	960	901	888	813	756	761	805	753	-	2238	2166	2155	2084	2068	2071	2077	2063	-				
	Avg % Diff	78.7	77.8	77.6	76.0	75.0	75.0	75.8	75.0	-	79.9	79.5	79.5	79.0	78.9	78.9	78.9	78.8	-				

Table D.12: Objective values compared to objective value of TBP30 method for  $T = 30$



**D.1.3 Removing trivial data**

		t <sub>bj</sub> = 0											t <sub>bj</sub> = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
RFTU	# T Best	-	-	12	8	7	3	7	1	3	-	-	2	2	1	0	5	3	0				
	# NT Best	-	-	2	3	5	6	6	7	6	-	-	9	6	5	7	6	3	6				
	Avg Diff	-	-	-71	-18	-18	27	-20	43	20	-	-	29	18	19	21	8	10	17				
	Avg % Diff	-	-	-9.41	-6.33	-9.80	6.26	-39.00	10.14	4.41	-	-	2.36	2.99	2.90	4.11	0.84	2.10	2.69				
	# Not Incl	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0				
OEDD	# T Best	4	3	3	2	2	2	2	2	-	5	5	5	4	4	4	4	4	-				
	# NT Best	3	3	3	3	3	3	3	3	-	4	3	3	1	1	1	1	1	-				
	Avg Diff	3	1	1	3	3	3	3	3	-	-7	-13	-13	-16	-16	-16	-16	-16	-				
	Avg % Diff	-0.07	2.30	2.30	2.83	2.83	2.83	2.83	2.83	-	-2.05	-4.29	-4.29	-5.95	-5.95	-5.95	-5.95	-5.95	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
EJDD	# T Best	4	2	2	2	1	1	1	1	-	3	1	1	1	1	1	1	1	-				
	# NT Best	8	9	9	9	10	10	10	10	-	1	1	1	1	1	1	1	1	-				
	Avg Diff	17	27	27	30	36	36	33	36	-	-1	-2	-2	-2	-2	-2	-2	-2	-				
	Avg % Diff	7.89	12.58	12.58	14.37	16.53	16.08	15.95	16.52	-	-0.01	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
EFMP	# T Best	5	5	5	5	5	5	5	5	-	0	0	0	0	0	0	0	0	-				
	# NT Best	1	1	1	1	2	1	1	2	-	1	1	1	0	0	0	0	0	-				
	Avg Diff	-18	-19	-19	-18	-19	-19	-18	-18	-	3	5	5	0	0	0	0	0	-				
	Avg % Diff	-3.40	-4.91	-4.91	-4.82	-5.22	-5.74	-4.82	-5.13	-	0.58	1.03	1.03	0.00	0.00	0.00	0.00	0.00	-				
	# Not Incl	2	2	2	2	2	2	2	2	-	0	0	0	0	0	0	0	0	-				
EAMP	# T Best	4	4	4	4	4	4	4	4	-	0	0	0	0	0	0	0	0	-				
	# NT Best	2	2	2	2	2	2	2	2	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	-12	-10	-10	-10	-10	-10	-10	-10	-	0	0	0	0	0	0	0	0	-				
	Avg % Diff	-1.11	-1.07	-1.07	-0.99	-1.07	-0.99	-0.99	-0.99	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-				
	# Not Incl	1	1	1	1	1	1	1	1	-	0	0	0	0	0	0	0	0	-				

Table 13: Use of non-trivial data compared to use of trivial data for  $T = 5$

		tbj = 0												tbj = 1											
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU						
RFTU	# T Best	-	-	11	4	9	7	5	2	2	-	-	4	2	1	2	1	4	0						
	# NT Best	-	-	1	3	2	2	6	7	5	-	-	9	5	5	3	5	4	6						
	Avg Diff	-	-	-54	-18	-34	-7	-14	13	6	-	-	29	5	18	10	16	2	13						
	Avg % Diff	-	-	-2.91	-7.67	-10.21	-6.32	-11.22	3.69	2.15	-	-	1.93	0.92	1.88	0.53	2.38	0.51	1.78						
	# Not Incl	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0						
OEDD	# T Best	5	5	5	4	4	4	4	4	-	2	0	0	0	0	0	0	0	-						
	# NT Best	1	1	1	2	2	2	2	2	-	3	4	4	5	4	4	4	4	-						
	Avg Diff	-15	-21	-21	-15	-16	-15	-16	-16	-	10	13	14	11	15	15	15	11	-						
	Avg % Diff	-4.59	-6.14	-6.14	-4.29	-4.28	-4.25	-4.32	-4.31	-	1.59	2.23	2.26	1.38	1.62	1.62	1.62	1.38	-						
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-						
EJDD	# T Best	3	3	3	3	3	3	2	3	-	5	3	3	3	3	3	3	3	-						
	# NT Best	5	5	5	6	5	5	6	5	-	4	2	2	2	2	2	2	2	-						
	Avg Diff	11	18	18	19	11	8	22	11	-	-7	-7	-7	-7	-7	-7	-7	-7	-						
	Avg % Diff	1.78	2.66	2.68	2.73	2.79	2.83	3.49	2.82	-	-2.14	-2.37	-2.37	-2.34	-2.34	-2.34	-2.34	-2.34	-						
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-						
EFMP	# T Best	5	6	6	5	6	5	5	6	-	0	0	0	0	0	0	0	0	-						
	# NT Best	2	1	1	2	0	1	2	0	-	2	2	2	2	2	2	2	2	-						
	Avg Diff	-3	-12	-13	-12	-13	-12	-13	-13	-	9	10	12	12	11	11	14	11	-						
	Avg % Diff	2.41	-2.11	-2.29	-3.74	-4.34	-4.16	-3.85	-4.38	-	0.74	0.84	1.09	1.08	0.88	0.88	1.22	0.89	-						
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-						
EAMP	# T Best	1	2	3	3	3	3	3	3	-	1	1	1	1	1	1	1	1	-						
	# NT Best	3	3	2	3	3	3	3	3	-	3	3	3	3	3	3	3	3	-						
	Avg Diff	12	10	8	11	10	10	9	9	-	15	15	15	15	19	19	19	19	-						
	Avg % Diff	1.46	1.49	1.15	1.94	2.06	2.07	1.86	1.93	-	1.02	1.02	1.01	1.03	1.32	1.32	1.30	1.32	-						
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-						

Table 14: Use of non-trivial data compared to use of trivial data for  $T = 10$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
RFTU	# T Best	-	-	8	5	7	6	6	6	1	-	-	3	2	0	0	2	1	0				
	# NT Best	-	-	2	2	3	3	4	2	6	-	-	7	3	2	2	3	4	3				
	Avg Diff	-	-	-40	-12	-26	-2	-26	-15	18	-	-	31	-8	11	12	5	8	13				
	Avg % Diff	-	-	-1.84	-3.51	-7.59	-2.15	-3.69	-2.76	1.51	-	-	0.31	-0.72	0.41	0.34	0.54	1.04	0.44				
	# Not Incl	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0				
OEED	# T Best	2	2	2	3	2	2	3	2	-	1	2	2	2	2	2	2	2	2	-			
	# NT Best	2	2	2	2	2	2	2	2	-	4	3	3	3	3	3	3	3	-				
	Avg Diff	8	2	3	1	5	5	0	5	-	2	5	8	7	6	6	8	6	-				
	Avg % Diff	0.84	-0.11	-0.07	0.13	0.50	0.52	0.13	0.50	-	-0.55	-0.44	-0.22	-0.16	-0.20	-0.20	-0.15	-0.21	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
EJDD	# T Best	1	0	0	2	2	2	2	2	-	3	1	1	1	1	1	1	1	-				
	# NT Best	4	4	4	4	3	3	3	3	-	2	2	2	2	2	2	2	2	-				
	Avg Diff	22	19	13	14	12	11	16	10	-	4	7	7	7	7	7	7	7	-				
	Avg % Diff	1.89	1.74	1.08	0.97	1.50	1.03	1.80	1.28	-	-0.09	0.14	0.14	0.14	0.14	0.14	0.14	0.14	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
EFMP	# T Best	5	3	3	3	3	3	3	3	-	1	1	1	1	1	1	1	1	-				
	# NT Best	3	5	5	5	5	5	5	5	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	-19	-16	-15	-13	-17	-17	-13	-17	-	-6	-5	-5	-7	-9	-9	-7	-9	-				
	Avg % Diff	-15.92	-2.58	-2.45	-5.24	-7.31	-7.30	-5.40	-7.32	-	-0.41	-0.40	-0.40	-0.57	-0.69	-0.68	-0.57	-0.69	-				
	# Not Incl	0	1	1	1	1	1	1	1	-	0	0	0	0	0	0	0	0	-				
EAMP	# T Best	5	5	6	5	5	5	5	5	-	0	0	0	0	0	0	0	0	-				
	# NT Best	1	2	1	2	2	2	2	2	-	0	0	0	0	0	0	0	0	-				
	Avg Diff	-27	-26	-29	-23	-21	-23	-24	-21	-	0	0	0	0	0	0	0	0	-				
	Avg % Diff	-11.73	-11.49	-11.70	-11.39	-14.48	-14.65	-11.45	-14.50	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-				
	# Not Incl	1	1	1	1	1	1	1	1	-	0	0	0	0	0	0	0	0	-				

Table 15: Use of non-trivial data compared to use of trivial data for  $T = 15$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
RFTU	# T Best	-	-	9	1	8	5	4	4	1	-	-	3	0	0	0	3	2	0				
	# NT Best	-	-	1	3	1	2	6	3	6	-	-	8	3	3	1	3	3	2				
	Avg Diff	-	-	-44	8	-24	-1	3	4	20	-	-	20	9	2	0	-1	4	3				
	Avg % Diff	-	-	-1.22	0.46	-3.74	-1.06	-0.35	0.10	0.80	-	-	0.40	0.27	0.09	0.01	-0.08	0.30	0.10				
	# Not Incl	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0				
OEDD	# T Best	3	3	3	3	3	3	3	3	-	3	1	1	2	1	1	1	1	1	-			
	# NT Best	3	3	3	3	3	3	3	3	-	0	2	2	0	2	2	1	1	1	-			
	Avg Diff	54	57	57	54	53	52	52	53	-	-5	4	4	0	6	6	2	2	2	-			
	Avg % Diff	2.57	2.58	2.58	2.57	2.47	2.42	2.41	2.47	-	-0.15	0.10	0.10	-0.01	0.23	0.23	0.08	0.08	0.08	-			
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-			
EJDD	# T Best	1	1	1	1	1	1	2	1	-	3	2	2	2	2	2	2	2	2	-			
	# NT Best	5	5	5	5	5	5	4	5	-	3	1	1	1	1	1	1	1	1	-			
	Avg Diff	29	24	25	26	22	21	16	22	-	2	0	0	2	0	0	0	0	0	-			
	Avg % Diff	3.97	3.33	3.56	3.34	4.08	3.71	3.35	4.08	-	0.06	-0.07	-0.07	0.06	-0.12	-0.12	-0.12	-0.12	-0.12	-			
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-			
EFMP	# T Best	1	2	2	1	3	3	1	3	-	1	1	1	1	2	2	1	2	2	-			
	# NT Best	2	1	1	1	1	1	1	1	-	1	1	1	1	1	1	1	1	1	-			
	Avg Diff	16	10	10	20	16	15	19	17	-	6	4	5	4	1	4	2	0	0	-			
	Avg % Diff	1.73	-2.40	-2.40	2.27	0.10	0.05	2.11	0.27	-	0.52	0.47	0.52	0.48	0.27	0.49	0.30	0.18	0.18	-			
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-			
EAMP	# T Best	1	1	2	2	2	2	3	2	-	0	0	0	0	0	0	1	0	0	-			
	# NT Best	2	1	1	1	1	1	0	1	-	1	1	1	1	2	2	1	2	2	-			
	Avg Diff	2	-1	-2	-2	-7	-8	-8	-7	-	5	1	3	3	2	2	1	2	2	-			
	Avg % Diff	-0.06	-0.33	-0.47	-0.31	-1.28	-1.33	-1.39	-1.28	-	0.13	0.04	0.07	0.08	0.08	0.08	0.00	0.08	0.08	-			
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-			

Table 16: Use of non-trivial data compared to use of trivial data for  $T = 20$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
RFTU	# T Best	-	-	12	6	8	7	8	5	2	-	-	5	2	3	3	4	3	3				
	# NT Best	-	-	3	5	4	4	5	8	9	-	-	9	8	5	4	7	8	4				
	Avg Diff	-	-	-81	-15	-22	5	-7	9	26	-	-	23	14	2	11	11	12	8				
	Avg % Diff	-	-	-1.95	-1.23	-1.84	0.06	-0.81	1.02	2.15	-	-	0.47	0.50	0.16	0.74	0.37	0.62	0.35				
	# Not Incl	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0				
OEDD	# T Best	2	2	1	2	1	1	1	1	-	4	4	4	2	3	3	2	2	-				
	# NT Best	3	3	4	3	4	4	4	4	-	3	3	3	4	3	3	4	4	-				
	Avg Diff	33	26	21	24	23	25	23	23	-	13	9	9	9	7	7	8	9	-				
	Avg % Diff	1.78	1.52	1.27	1.27	1.12	1.33	1.18	1.14	-	0.50	0.24	0.24	0.27	0.17	0.17	0.22	0.26	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
EJDD	# T Best	5	6	6	6	7	7	6	7	-	2	2	2	2	2	2	2	2	-				
	# NT Best	6	5	4	4	3	3	4	3	-	2	1	1	1	1	1	1	1	-				
	Avg Diff	38	27	24	29	26	26	28	25	-	6	4	4	4	4	4	4	4	-				
	Avg % Diff	1.29	-1.49	-1.82	-2.81	-7.80	-6.96	-7.07	-14.37	-	0.14	0.06	0.06	0.06	0.06	0.06	0.06	0.06	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
EFMP	# T Best	3	2	2	3	3	3	3	3	-	0	1	1	1	1	1	1	1	-				
	# NT Best	4	5	5	4	3	3	4	3	-	1	0	0	0	0	0	0	0	-				
	Avg Diff	-9	-4	-3	-7	-9	-6	-4	-9	-	2	0	0	0	-1	-1	0	-1	-				
	Avg % Diff	-3.90	-3.42	-3.32	-3.62	-6.69	-4.43	-2.96	-9.13	-	0.06	0.00	0.00	0.00	-0.03	-0.03	0.00	-0.03	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
EAMP	# T Best	5	4	4	5	5	5	5	4	-	0	1	1	1	1	1	1	1	-				
	# NT Best	6	6	6	5	5	5	5	6	-	3	2	2	2	2	2	2	2	-				
	Avg Diff	2	22	22	10	1	2	-1	4	-	13	7	7	7	4	4	7	4	-				
	Avg % Diff	-0.17	2.01	1.97	2.04	0.76	0.85	0.96	1.42	-	0.53	0.30	0.30	0.29	0.16	0.16	0.28	0.18	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				

Table 17: Use of non-trivial data compared to use of trivial data for  $T = 25$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
RFTU	# T Best	-	-	9	8	8	4	9	3	0	-	-	1	4	0	0	3	1	0				
	# NT Best	-	-	4	2	2	4	5	7	6	-	-	11	4	7	7	5	8	7				
	Avg Diff	-	-	-44	-22	-11	14	-18	22	29	-	-	39	-2	27	27	19	25	27				
	Avg % Diff	-	-	-0.80	-0.89	-0.93	0.35	-0.82	1.45	1.33	-	-	0.66	-0.02	0.78	0.82	0.43	0.94	0.81				
	# Not Incl	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0				
OEDD	# T Best	2	2	2	2	3	3	3	3	-	4	5	5	4	5	4	4	4	-				
	# NT Best	3	3	3	4	4	4	4	4	-	2	1	1	1	1	2	1	1	-				
	Avg Diff	33	30	31	28	19	23	19	19	-	-15	-14	-16	-12	-11	-6	-7	-11	-				
	Avg % Diff	3.09	2.74	2.78	2.38	2.44	2.55	2.43	2.44	-	-0.61	-0.42	-0.46	-0.52	-0.37	-0.20	-0.25	-0.46	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
EJDD	# T Best	3	3	3	2	5	4	5	5	-	2	1	1	1	1	1	2	1	-				
	# NT Best	8	6	6	6	4	5	5	4	-	3	2	2	2	2	2	2	2	-				
	Avg Diff	51	45	44	41	31	32	34	30	-	6	6	6	6	6	6	5	6	-				
	Avg % Diff	1.80	1.55	1.53	1.53	0.04	0.03	0.64	0.04	-	0.08	0.11	0.11	0.11	0.11	0.11	0.06	0.11	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
EFMP	# T Best	6	7	7	7	8	7	7	8	-	1	1	1	0	0	0	0	0	-				
	# NT Best	4	3	3	4	3	4	4	3	-	3	3	3	4	4	4	4	4	-				
	Avg Diff	-8	-5	-15	2	-12	-8	2	-15	-	8	8	7	15	15	15	15	15	-				
	Avg % Diff	-0.03	-0.47	-1.43	0.37	-1.35	-0.88	0.52	-1.28	-	0.28	0.31	0.28	0.67	0.67	0.67	0.66	0.67	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
EAMP	# T Best	1	2	1	3	4	4	3	4	-	1	1	1	1	0	1	1	0	-				
	# NT Best	9	9	10	9	8	8	9	8	-	4	4	4	4	4	4	4	4	-				
	Avg Diff	100	102	102	101	97	96	104	102	-	37	29	29	22	24	20	21	23	-				
	Avg % Diff	6.98	7.54	7.31	7.23	8.50	8.38	8.07	8.93	-	1.35	1.11	1.10	0.90	0.96	0.86	0.88	0.93	-				
	# Not Incl	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				

Table 18: Use of non-trivial data compared to use of trivial data for  $T = 30$

### D.1.4 Comparison of order plan representations and dominance heuristics

		tbj = 0												tbj = 1											
		PC/BC	BC/SCT	SCT/FD	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU	PC/BC	BC/SCT	SCT/FD	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU								
T	RFTU	# Impr	-	-	20	20	20	20	20	-	-	20	20	20	20	20	20								
		Avg Diff	-	-	588	493	633	578	712	674	-	-	480	467	479	483	597	509							
		Avg % Diff	-	-	52.7	44.7	57.8	55.3	65.0	63.4	-	-	41.1	41.0	42.3	44.3	52.3	45.5							
	OEDD	# Impr	8	0	7	10	10	10	10	-	11	0	10	10	10	10	10	-							
		Avg Diff	13	0	29	30	30	30	30	-	28	0	31	31	31	31	31	-							
		Avg % Diff	2.9	0.0	3.0	4.1	4.1	4.1	4.1	-	3.9	0.0	5.0	5.0	5.0	5.0	5.0	-							
	EJDD	# Impr	7	1	6	7	6	7	7	-	5	0	4	5	4	4	5	-							
		Avg Diff	7	2	16	27	24	21	27	-	5	0	11	17	13	11	17	-							
		Avg % Diff	1.6	0.1	1.5	3.7	2.8	3.3	3.7	-	1.0	0.0	1.0	1.3	1.0	1.0	1.3	-							
EFMP	# Impr	8	1	6	7	7	6	7	-	6	0	3	4	4	3	4	-								
	Avg Diff	18	1	7	14	12	7	15	-	10	0	11	12	12	11	12	-								
	Avg % Diff	4.6	0.1	1.2	2.6	2.0	1.2	2.6	-	0.8	0.0	1.3	1.6	1.6	1.3	1.6	-								
EAMP	# Impr	8	2	5	5	5	5	5	-	7	0	4	4	4	4	4	-								
	Avg Diff	12	3	7	10	8	7	11	-	10	0	10	10	10	10	10	-								
	Avg % Diff	2.9	0.1	0.7	1.1	0.8	0.7	1.1	-	1.5	0.0	0.7	0.7	0.7	0.7	0.7	-								
NT	RFTU	# Impr	-	-	20	20	20	20	20	-	-	20	20	20	20	20	20								
		Avg Diff	-	-	642	546	731	630	827	766	-	-	470	457	471	463	578	497							
		Avg % Diff	-	-	54.3	45.8	62.7	55.8	70.9	66.5	-	-	41.8	41.2	43.3	43.8	52.7	45.9							
	OEDD	# Impr	9	0	8	11	11	11	11	-	8	0	7	7	7	7	7	-							
		Avg Diff	12	0	30	32	32	32	32	-	22	0	28	28	28	28	28	-							
		Avg % Diff	4.3	0.0	3.6	4.8	4.8	4.8	4.8	-	2.3	0.0	3.3	3.3	3.3	3.3	3.3	-							
	EJDD	# Impr	7	1	8	9	9	9	9	-	4	0	4	5	4	4	5	-							
		Avg Diff	16	2	18	36	34	26	36	-	4	0	11	17	13	11	17	-							
		Avg % Diff	7.2	0.1	3.8	8.6	7.7	7.6	8.6	-	0.7	0.0	1.0	1.3	1.0	1.0	1.3	-							
EFMP	# Impr	7	1	7	7	7	7	8	-	7	0	2	3	3	2	3	-								
	Avg Diff	17	1	8	14	11	8	15	-	12	0	6	7	7	6	7	-								
	Avg % Diff	4.0	0.1	1.3	2.8	1.7	1.3	2.8	-	1.3	0.0	0.3	0.6	0.6	0.3	0.6	-								
EAMP	# Impr	7	2	6	5	6	6	6	-	7	0	4	4	4	4	4	-								
	Avg Diff	13	3	8	10	9	8	11	-	10	0	10	10	10	10	10	-								
	Avg % Diff	2.9	0.1	0.8	1.1	0.9	0.8	1.2	-	1.5	0.0	0.7	0.7	0.7	0.7	0.7	-								

Table 19: Impact of order plan representations and dominance heuristics for  $T = 5$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
T	RFTU	-	-	0	3	0	0	0	5	6	7	-	-	0	4	0	1	1	13	4			
		# Best																					
		# Unique																					
	OEDD	10	10	10	17	20	20	20	20	20	-	6	10	10	20	20	20	20	20	20	-		
		# Best																					
		# Unique																					
NT	EJDD	11	13	13	15	19	18	17	20	-	13	14	14	17	19	18	17	19	19	-			
		# Best																					
		# Unique																					
	EFMP	12	13	13	14	19	18	14	19	-	13	16	16	18	20	20	18	20	20	-			
		# Best																					
		# Unique																					
NT	EAMP	12	15	15	17	19	17	16	19	-	13	16	16	19	20	20	19	20	20	-			
		# Best																					
		# Unique																					
	RFTU	-	-	0	4	0	1	2	10	5	-	-	0	4	1	1	1	13	3	3			
		# Best																					
		# Unique																					
NT	OEDD	8	9	9	17	20	20	20	20	-	11	13	13	20	20	20	20	20	20	-			
		# Best																					
		# Unique																					
	EJDD	11	10	10	11	19	17	15	19	-	14	13	13	16	18	17	16	18	18	-			
		# Best																					
		# Unique																					
NT	EFMP	12	12	12	14	18	17	14	19	-	13	17	17	18	20	20	18	20	20	-			
		# Best																					
NT	EAMP	13	14	14	17	18	17	16	19	-	13	16	16	19	20	20	19	20	20	-			
		# Best																					
	# Unique																						

Table D.20: (Unique) best order plan representations or dominance heuristics for  $T = 5$



		tbj = 0												tbj = 1											
		PC/BC	BC/SCT	SCT/BD	SCT/BD	SCT/FBD	SCT/FBD	SCT/MPD	SCT/MPD	SCT/DYD	SCT/DYD	SCT/FTU	SCT/FTU	PC/BC	BC/SCT	SCT/BD	SCT/BD	SCT/FBD	SCT/FBD	SCT/MPD	SCT/MPD	SCT/DYD	SCT/DYD	SCT/FTU	SCT/FTU
T	RFTU	-	-	20	20	1204	1108	1279	1104	1408	1339	-	-	-	-	20	20	904	906	910	833	1119	929		
	OEDD	8	0	9	9	61.4	57.8	66.2	57.4	72.5	70.0	-	-	-	-	9	9	47.0	47.5	47.5	43.6	58.0	47.8		
	EJDD	14	0	55	55	5.7	5.7	5.7	5.7	5.7	5.7	-	-	-	-	39	1	30	25	25	25	30	-		
NT	EFMP	2.3	0.0	5.7	5.7	8.8	8.8	8.3	6.6	9.0	-	-	-	-	5.9	0.0	3.9	3.6	3.6	3.6	3.9	-			
	EJDD	6	2	9	11	11	11	11	11	11	-	-	-	-	8	3	6	6	5	5	6	-			
	EFMP	8	0	40	68	65	51	69	-	-	-	-	-	-	4	6	19	19	19	17	21	-			
T	EAMP	1.7	0.0	5.2	10.4	9.8	7.6	10.4	-	-	-	-	-	-	0.8	0.4	1.4	1.5	1.5	1.2	1.7	-			
	RFTU	13	4	11	13	14	10	14	-	-	-	-	-	-	10	1	7	7	7	7	7	-			
	OEDD	32	3	22	40	36	22	42	-	-	-	-	-	-	15	1	15	20	20	16	20	-			
NT	EFMP	8.8	0.9	6.7	8.8	8.3	6.6	9.0	-	-	-	-	-	-	1.1	0.0	1.1	1.5	1.5	1.1	1.5	-			
	EJDD	9	5	10	10	11	9	11	-	-	-	-	-	-	10	2	6	6	6	6	6	-			
	EAMP	23	6	21	31	30	24	33	-	-	-	-	-	-	14	1	16	23	23	17	23	-			
T	RFTU	2.6	1.3	4.2	5.5	5.6	4.6	5.9	-	-	-	-	-	-	1.2	0.1	1.2	1.8	1.8	1.2	1.8	-			
	OEDD	-	-	20	20	1241	1128	1326	1144	1476	1399	-	-	-	-	-	20	20	880	891	820	1093	913		
	EJDD	8	0	9	9	61.2	56.8	66.6	57.6	73.8	71.0	-	-	-	-	-	46.6	47.5	46.9	44.0	57.3	47.6			
NT	EFMP	8	0	9	9	9	9	9	-	-	-	-	-	-	11	1	10	10	10	10	10	-			
	EJDD	9	0	61	60	61	60	60	-	-	-	-	-	-	43	1	27	26	26	26	27	-			
	EAMP	1.2	0.0	6.4	6.4	6.5	6.4	6.4	-	-	-	-	-	-	6.6	0.1	3.1	3.0	3.0	3.0	3.1	-			
T	RFTU	6	2	9	11	11	10	11	-	-	-	-	-	-	9	3	7	7	6	6	7	-			
	OEDD	15	0	41	61	55	55	62	-	-	-	-	-	-	4	6	19	19	19	17	21	-			
	EJDD	2.2	0.0	4.7	9.7	9.1	7.6	9.8	-	-	-	-	-	-	0.5	0.4	1.4	1.5	1.5	1.2	1.7	-			
NT	EFMP	10	2	9	12	13	8	13	-	-	-	-	-	-	10	2	8	8	8	8	8	-			
	EJDD	23	2	24	41	37	22	43	-	-	-	-	-	-	16	3	15	20	20	18	20	-			
	EAMP	2.5	0.8	4.3	6.4	6.0	4.1	6.6	-	-	-	-	-	-	1.3	0.3	1.1	1.3	1.3	1.2	1.3	-			
T	RFTU	9	4	9	10	11	9	11	-	-	-	-	-	-	10	1	6	7	7	7	7	-			
	OEDD	22	4	23	32	32	24	34	-	-	-	-	-	-	14	1	16	27	27	20	27	-			
	EJDD	2.6	1.0	4.9	6.5	6.6	5.3	6.8	-	-	-	-	-	-	1.2	0.0	1.2	2.1	2.1	1.6	2.1	-			

Table 21: Impact of order plan representations and dominance heuristics for  $T = 10$

		tbj = 0													tbj = 1												
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU								
T	RFTU	-	-	0	2	0	0	0	15	3	-	-	0	1	0	0	2	16	1								
		-	-	0	2	0	0	0	15	3	-	-	0	1	0	0	2	16	1								
	OEDD	11	11	11	19	18	20	17	19	-	7	11	11	20	18	18	18	20	-								
		0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-								
	EJDD	9	9	9	10	18	16	13	19	-	9	13	13	17	17	17	16	19	-								
		0	0	0	0	0	1	0	1	-	1	0	0	0	0	0	0	1	-								
	EFMP	6	6	6	12	16	13	11	19	-	7	13	13	16	20	19	17	20	-								
		0	0	0	0	0	0	0	2	-	0	0	0	0	0	0	0	0	-								
	EAMP	7	8	9	12	15	16	12	20	-	7	13	14	16	20	20	17	20	-								
		0	0	0	0	0	0	0	2	-	0	0	0	0	0	0	0	0	-								
NT	RFTU	-	-	0	1	0	0	0	16	3	-	-	0	1	1	0	1	16	1								
		-	-	0	1	0	0	0	16	3	-	-	0	1	1	0	1	16	1								
	OEDD	11	11	11	19	18	20	17	18	-	6	10	10	20	19	19	19	20	-								
		0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-								
	EJDD	9	9	9	11	18	14	15	20	-	9	11	11	16	16	16	15	18	-								
		0	0	0	0	0	0	0	2	-	2	0	0	0	0	0	0	1	-								
	EFMP	7	7	7	11	15	12	9	18	-	7	12	12	16	19	18	17	20	-								
		0	0	0	1	0	0	0	2	-	0	0	0	0	0	0	0	1	-								
	EAMP	7	8	9	13	16	18	11	19	-	6	13	13	15	20	20	16	20	-								
		0	0	0	0	0	1	0	0	-	0	0	0	0	0	0	0	0	-								

Table D.22: (Unique) best order plan representations or dominance heuristics for  $T = 10$

		tbj = 0												tbj = 1											
		PC/BC	BC/SCT	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU	PC/BC	BC/SCT	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU	PC/BC	BC/SCT	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU			
T	RFTU	-	-	20	20	20	20	20	-	-	20	20	20	20	20	-	-	20	20	20	20	20			
	Avg Diff	-	-	1932	1828	2017	1741	2285	2086	-	-	1361	1389	1387	1323	1435	-	-	1361	1389	1387	1323	1435		
	Avg % Diff	-	-	64.2	61.2	67.5	58.5	76.6	70.7	-	-	45.4	46.8	47.1	44.7	58.2	48.4	-	-	45.4	46.8	47.1	44.7	58.2	
T	OEDD	12	3	12	12	12	12	12	-	15	2	16	16	16	16	16	-	15	2	16	16	16	16	16	
	Avg Diff	33	5	51	55	55	54	56	-	71	4	72	72	72	72	74	-	71	4	72	72	72	72	74	
	Avg % Diff	7.3	0.8	3.5	3.7	3.7	3.7	3.7	-	4.7	0.3	6.5	6.3	6.3	6.4	6.5	-	4.7	0.3	6.5	6.3	6.3	6.4	6.5	
T	EJDD	8	4	12	14	13	13	14	-	13	4	14	13	14	14	14	-	13	4	14	13	14	14	14	
	Avg Diff	6	10	52	99	92	89	101	-	20	6	28	33	33	29	34	-	20	6	28	33	33	29	34	
	Avg % Diff	1.2	0.9	4.9	16.2	15.9	12.9	16.4	-	1.8	0.4	1.6	1.9	1.9	1.6	1.9	-	1.8	0.4	1.6	1.9	1.9	1.6	1.9	
T	EFMP	14	5	11	14	13	12	14	-	11	5	12	13	13	13	13	-	11	5	12	13	13	13	13	
	Avg Diff	36	5	33	72	66	36	77	-	22	7	23	28	28	25	29	-	22	7	23	28	28	25	29	
	Avg % Diff	9.6	0.9	5.9	11.9	11.6	8.7	12.4	-	1.3	0.5	1.6	2.3	2.3	2.1	2.3	-	1.3	0.5	1.6	2.3	2.3	2.1	2.3	
T	EAMP	9	5	11	14	14	12	14	-	13	5	8	10	10	9	10	-	13	5	8	10	10	9	10	
	Avg Diff	24	4	26	57	59	46	60	-	32	2	21	31	31	22	31	-	32	2	21	31	31	22	31	
	Avg % Diff	2.4	0.4	11.2	17.0	17.0	13.8	17.1	-	2.4	0.1	1.2	1.7	1.7	1.2	1.7	-	2.4	0.1	1.2	1.7	1.7	1.2	1.7	
NT	RFTU	-	-	20	20	20	20	20	20	-	-	20	20	20	20	20	-	-	20	20	20	20	20		
	Avg Diff	-	-	1959	1842	2055	1754	2310	2143	-	-	1322	1370	1368	1297	1713	1417	-	-	1322	1370	1368	1297	1713	
	Avg % Diff	-	-	64.2	60.5	67.8	58.3	76.3	71.5	-	-	44.8	46.9	47.1	44.8	58.3	48.5	-	-	44.8	46.9	47.1	44.8	58.3	
NT	OEDD	12	4	12	12	12	12	12	-	15	3	17	17	17	17	17	-	15	3	17	17	17	17	17	
	Avg Diff	27	6	50	57	57	51	58	-	74	8	71	70	69	71	71	-	74	8	71	70	69	71	71	
	Avg % Diff	6.3	0.9	3.7	4.2	4.2	3.9	4.2	-	4.9	0.5	6.6	6.4	6.4	6.5	6.5	-	4.9	0.5	6.6	6.4	6.4	6.5	6.5	
NT	EJDD	7	3	12	14	13	13	14	-	14	4	14	13	14	14	14	-	14	4	14	13	14	14	14	
	Avg Diff	3	4	53	98	89	92	97	-	24	6	28	33	33	29	34	-	24	6	28	33	33	29	34	
	Avg % Diff	1.0	0.2	4.7	16.7	15.8	13.6	16.6	-	2.1	0.4	1.6	1.9	1.9	1.6	1.9	-	2.1	0.4	1.6	1.9	1.9	1.6	1.9	
NT	EFMP	13	7	11	14	13	12	14	-	11	5	12	13	13	13	13	-	11	5	12	13	13	13	13	
	Avg Diff	39	7	35	70	64	37	75	-	22	7	22	25	25	23	26	-	22	7	22	25	25	23	26	
	Avg % Diff	5.8	1.3	5.9	10.9	10.6	8.6	11.4	-	1.3	0.5	1.5	2.1	2.1	2.0	2.1	-	1.3	0.5	1.5	2.1	2.1	2.0	2.1	
NT	EAMP	9	4	11	13	13	12	13	-	13	5	8	10	10	9	10	-	13	5	8	10	10	9	10	
	Avg Diff	25	2	32	65	64	51	68	-	32	2	21	31	31	22	31	-	32	2	21	31	31	22	31	
	Avg % Diff	2.6	0.2	11.5	17.0	16.9	14.1	17.1	-	2.4	0.1	1.2	1.7	1.7	1.2	1.7	-	2.4	0.1	1.2	1.7	1.7	1.2	1.7	

Table 23: Impact of order plan representations and dominance heuristics for  $T = 15$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
T	RFTU	-	-	0	2	0	0	0	15	3	-	-	0	0	0	0	0	0	19	1			
		-	-	0	2	0	0	0	15	3	-	-	0	0	0	0	0	0	19	1			
	OEDD	7	8	8	17	19	18	19	20	-	2	4	4	18	14	14	15	18	-	-			
		0	0	0	0	0	0	0	1	-	0	0	0	1	0	0	0	1	-	-			
	EJDD	7	6	6	6	15	12	13	17	-	5	6	6	13	16	16	14	19	-	-			
		1	0	0	0	0	0	1	2	-	1	0	0	0	0	0	0	1	-	-			
NT	EFMP	4	5	6	10	16	14	11	20	-	5	6	7	14	14	14	14	17	-	-			
		0	0	0	0	0	0	0	3	-	0	0	0	0	0	2	0	1	-	-			
	EAMP	5	5	6	8	15	15	11	18	-	5	8	10	14	19	20	15	19	-	-			
		0	0	0	0	0	1	1	3	-	0	0	0	0	0	1	0	0	-	-			
	RFTU	-	-	0	1	0	0	0	15	4	-	-	0	0	0	0	0	0	19	1			
		-	-	0	1	0	0	0	15	4	-	-	0	0	0	0	0	0	19	1			
NT	OEDD	7	8	8	16	18	17	17	19	-	2	3	3	19	14	14	16	18	-	-			
		0	0	0	1	0	0	0	1	-	0	0	0	1	0	0	0	1	-	-			
	EJDD	7	6	6	7	18	13	13	17	-	4	6	6	14	17	17	15	20	-	-			
		1	0	0	0	1	0	0	0	-	0	0	0	0	0	0	0	1	-	-			
	EFMP	5	5	6	8	16	14	10	20	-	5	6	7	14	14	14	14	17	-	-			
		0	0	0	0	0	0	0	3	-	0	0	0	0	0	2	0	1	-	-			
EAMP	6	6	7	9	15	14	13	19	-	5	8	10	14	19	20	15	19	-	-				
	0	0	0	0	0	0	1	4	-	0	0	0	0	0	1	0	0	-	-				

Table D.24: (Unique) best order plan representations or dominance heuristics for  $T = 15$

		tbj = 0												tbj = 1											
		PC/BC	BC/SCT	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU	PC/BC	BC/SCT	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU	PC/BC	BC/SCT	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU			
T	RFTU	-	-	20	20	20	20	20	-	-	20	20	20	20	20	-	-	20	20	20	20	20	20		
	Avg Diff	-	-	2550	2467	2682	2143	2927	2768	-	-	1758	1833	1851	1588	2212	1879	-	-	1758	1833	1851	1588		
	Avg % Diff	-	-	63.8	62.8	68.1	54.3	74.2	70.6	-	-	43.8	46.2	46.9	39.7	55.5	47.3	-	-	43.8	46.2	46.9	39.7		
T	OEDD	15	2	16	16	16	16	16	-	18	4	18	19	19	18	19	-	18	4	18	19	18	19		
	Avg Diff	39	3	52	68	68	64	68	-	78	2	131	123	128	128	142	-	78	2	131	123	128	128		
	Avg % Diff	5.0	0.1	6.2	7.2	7.3	6.9	7.3	-	4.1	0.1	6.4	6.3	6.5	6.3	7.0	-	4.1	0.1	6.4	6.3	6.5	6.3		
T	EJDD	12	4	14	15	15	14	15	-	12	1	8	13	12	11	13	-	12	1	8	13	12	11		
	Avg Diff	17	3	44	102	94	83	102	-	22	0	26	44	43	38	44	-	22	0	26	44	43	38		
	Avg % Diff	3.6	0.2	4.3	11.5	10.3	9.2	11.5	-	1.2	0.0	1.3	2.4	2.3	1.9	2.4	-	1.2	0.0	1.3	2.4	2.3	1.9		
T	EFMP	16	10	17	19	19	17	19	-	16	5	15	16	16	15	17	-	16	5	15	16	16	15		
	Avg Diff	50	8	49	139	119	54	142	-	37	4	22	37	34	27	42	-	37	4	22	37	34	27		
	Avg % Diff	7.1	1.4	8.8	21.9	19.5	9.3	22.3	-	2.2	0.3	1.1	1.8	1.6	1.4	2.1	-	2.2	0.3	1.1	1.8	1.6	1.4		
T	EAMP	14	10	14	19	19	16	19	-	19	5	15	17	18	16	18	-	19	5	15	17	18	16		
	Avg Diff	44	20	29	71	71	53	74	-	46	5	26	32	29	27	35	-	46	5	26	32	29	27		
	Avg % Diff	5.9	2.5	4.6	13.1	13.1	9.0	13.5	-	2.4	0.3	1.5	1.9	1.7	1.6	2.0	-	2.4	0.3	1.5	1.9	1.7	1.6		
NT	RFTU	-	-	20	20	20	20	20	20	-	-	20	20	20	20	20	20	-	-	20	20	20	20		
	Avg Diff	-	-	2601	2487	2725	2190	2974	2831	-	-	1746	1815	1831	1567	2195	1862	-	-	1746	1815	1831	1567		
	Avg % Diff	-	-	64.4	62.4	68.3	54.7	74.4	71.2	-	-	43.8	46.0	46.6	39.5	55.5	47.2	-	-	43.8	46.0	46.6	39.5		
NT	OEDD	16	2	17	17	17	17	17	-	19	4	19	20	20	19	20	-	19	4	19	20	20	19		
	Avg Diff	42	3	49	64	63	58	64	-	86	2	127	126	130	126	140	-	86	2	127	126	130	126		
	Avg % Diff	5.1	0.1	6.2	7.1	7.1	6.7	7.2	-	4.4	0.1	6.3	6.4	6.6	6.3	7.0	-	4.4	0.1	6.3	6.4	6.6	6.3		
NT	EJDD	12	5	14	15	15	14	15	-	12	1	10	14	13	12	14	-	12	1	10	14	13	12		
	Avg Diff	12	3	46	99	90	74	99	-	20	0	28	44	42	37	44	-	20	0	28	44	42	37		
	Avg % Diff	2.6	0.6	4.0	12.1	10.5	9.0	12.1	-	1.0	0.0	1.4	2.3	2.3	1.9	2.3	-	1.0	0.0	1.4	2.3	2.3	1.9		
NT	EFMP	15	10	17	19	19	17	19	-	15	6	15	15	16	14	16	-	15	6	15	15	16	14		
	Avg Diff	44	8	58	144	124	62	148	-	35	5	21	33	33	24	37	-	35	5	21	33	33	24		
	Avg % Diff	4.7	1.4	10.7	23.0	20.5	10.9	23.5	-	2.1	0.4	1.0	1.5	1.6	1.1	1.7	-	2.1	0.4	1.0	1.5	1.6	1.1		
NT	EAMP	15	10	13	19	19	15	19	-	19	5	15	18	18	16	18	-	19	5	15	18	18	16		
	Avg Diff	41	19	29	66	64	46	68	-	43	6	26	32	29	26	34	-	43	6	26	32	29	26		
	Avg % Diff	5.6	2.4	4.7	12.5	12.4	8.1	12.9	-	2.3	0.4	1.5	1.9	1.7	1.5	2.0	-	2.3	0.4	1.5	1.9	1.7	1.5		

Table 25: Impact of order plan representations and dominance heuristics for  $T = 20$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
T	RFTU	-	-	0	3	0	1	0	14	2	-	-	0	0	0	0	0	0	20	0			
		-	-	0	3	0	1	0	14	2	-	-	0	0	0	0	0	0	20	0			
	OEDD	3	4	4	13	17	19	15	18	-	1	1	1	12	12	11	11	11	17	-			
		0	0	0	0	0	1	0	0	-	0	0	0	1	0	0	0	0	2	-			
	EJDD	3	5	5	6	18	14	11	18	-	5	6	6	8	18	14	11	19	-				
		1	0	0	0	0	0	0	0	-	1	0	0	0	0	0	0	0	0	-			
NT	EFMP	1	1	1	2	13	10	2	18	-	1	2	3	8	14	15	10	19	-				
		0	0	0	0	0	2	0	4	-	0	0	0	0	0	0	1	3	-				
	EAMP	1	1	1	4	11	12	7	16	-	0	2	2	11	14	11	11	18	-				
		0	0	0	0	0	1	1	4	-	0	0	0	0	0	0	0	3	-				
	RFTU	-	-	0	3	0	1	0	13	3	-	-	0	1	0	0	0	19	0				
		-	-	0	3	0	1	0	13	3	-	-	0	1	0	0	0	19	0				
NT	OEDD	2	3	3	12	17	18	14	18	-	0	0	0	11	12	11	11	17	-				
		0	0	0	0	0	1	0	0	-	0	0	0	1	0	0	0	2	-				
	EJDD	2	5	5	6	19	16	12	19	-	6	5	5	9	17	13	10	18	-				
		0	0	0	0	0	0	0	0	-	2	0	0	0	0	0	0	0	-				
	EFMP	1	1	1	2	11	9	2	16	-	1	2	3	9	14	15	10	18	-				
		0	0	0	0	0	3	0	4	-	0	0	0	1	0	0	1	2	-				
EAMP	1	1	1	5	11	12	7	16	-	0	2	2	11	14	11	9	19	-					
	0	0	0	0	0	1	0	4	-	0	0	0	1	0	0	0	3	-					

Table D.26: (Unique) best order plan representations or dominance heuristics for  $T = 20$

		tbj = 0												tbj = 1											
		PC/BC	BC/SCT	SCT/BD	SCT/BD	SCT/FBD	SCT/BD	SCT/BD	SCT/DYD	SCT/FTU	PC/BC	BC/SCT	SCT/BD	SCT/BD	SCT/FBD	SCT/BD	SCT/BD	SCT/DYD	SCT/FTU						
T	RFTU	-	-	20	20	3275	2684	3554	3356	-	-	-	2096	2107	2110	1943	2580	2162	-						
	OEDD	17	10	16	17	17	17	17	-	-	20	6	17	17	17	17	18	-	-						
	EJDD	51	17	69	83	78	80	83	-	-	129	8	116	114	117	112	127	-	-						
	Avg % Diff	2.8	0.9	5.2	6.2	5.9	6.0	6.2	-	-	5.1	0.2	4.7	4.5	4.6	4.4	5.1	-	-						
	# Impr	11	5	17	19	19	18	19	-	-	12	3	13	14	14	14	15	-	-						
	Avg Diff	-6	8	79	114	109	94	116	-	-	19	4	52	65	62	56	66	-	-						
	Avg % Diff	2.4	0.6	5.2	9.8	9.3	8.2	10.7	-	-	0.8	0.1	1.7	2.2	2.2	2.0	2.3	-	-						
	# Impr	18	10	19	19	19	18	20	-	-	13	7	15	15	15	15	15	-	-						
	Avg Diff	60	13	77	146	144	92	152	-	-	47	6	38	59	54	38	62	-	-						
	Avg % Diff	6.5	0.8	9.0	16.5	16.0	10.2	17.6	-	-	1.7	0.3	1.8	2.6	2.5	1.8	2.8	-	-						
	# Impr	18	12	17	19	19	19	19	-	-	15	6	12	17	17	13	17	-	-						
	Avg Diff	48	25	64	128	128	93	136	-	-	44	7	55	81	69	61	84	-	-						
	Avg % Diff	4.2	1.5	6.3	11.5	11.5	9.0	12.0	-	-	1.8	0.4	2.0	3.2	2.7	2.2	3.4	-	-						
NT	RFTU	-	-	20	20	3361	2757	3643	3464	-	-	-	2087	2098	2098	1931	2570	2147	-						
	OEDD	17	10	15	16	17	17	17	-	-	20	6	17	17	17	17	18	-	-						
	EJDD	44	12	72	85	82	83	85	-	-	125	8	116	112	115	111	127	-	-						
	Avg % Diff	2.5	0.7	5.1	6.1	6.0	6.0	6.1	-	-	4.9	0.3	4.7	4.4	4.6	4.4	5.1	-	-						
	# Impr	10	4	16	18	18	17	18	-	-	12	3	13	14	14	14	15	-	-						
	Avg Diff	-17	5	83	117	111	98	117	-	-	18	4	52	65	62	56	66	-	-						
	Avg % Diff	0.3	0.3	4.4	6.6	6.3	5.6	6.6	-	-	0.7	0.1	1.7	2.2	2.2	2.0	2.3	-	-						
	# Impr	19	11	19	19	20	18	20	-	-	13	7	15	15	15	15	15	-	-						
	Avg Diff	66	13	74	140	141	91	147	-	-	45	6	38	58	54	38	62	-	-						
	Avg % Diff	6.8	0.9	8.7	15.1	15.5	10.3	15.9	-	-	1.6	0.3	1.8	2.6	2.5	1.8	2.7	-	-						
	# Impr	18	12	18	19	19	19	19	-	-	13	6	12	16	16	13	17	-	-						
	Avg Diff	67	25	52	107	108	70	118	-	-	38	7	54	78	66	60	81	-	-						
	Avg % Diff	6.3	1.5	6.7	10.8	11.0	8.6	12.0	-	-	1.5	0.4	2.0	3.1	2.5	2.2	3.2	-	-						

Table 27: Impact of order plan representations and dominance heuristics for  $T = 25$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
T	RFTU	-	-	0	2	0	1	0	14	3	-	-	0	0	0	0	0	0	19	1			
		# Best	# Unique																				
	OEDD	2	2	3	13	19	17	17	20	-	0	1	2	10	12	11	9	17	-				
		# Best	# Unique																				
	EJDD	4	1	1	4	15	12	6	16	-	3	5	5	12	16	15	13	18	-				
		# Best	# Unique																				
EFMP	0	0	0	4	10	7	5	14	-	5	5	5	10	13	14	10	18	-					
	# Best	# Unique																					
EAMP	1	1	1	3	13	11	6	17	-	1	3	3	7	13	11	9	17	-					
	# Best	# Unique																					
RFTU	-	-	0	3	0	1	0	13	3	-	-	0	0	0	0	0	0	19	1				
	# Best	# Unique																					
OEDD	2	2	3	12	19	19	18	20	-	0	1	2	11	11	10	7	17	-					
	# Best	# Unique																					
EJDD	4	2	2	6	16	12	8	16	-	3	5	5	12	16	15	13	18	-					
	# Best	# Unique																					
EFMP	0	0	0	3	10	9	4	15	-	5	5	5	10	13	14	10	18	-					
	# Best	# Unique																					
EAMP	1	1	1	3	11	8	6	19	-	2	3	3	9	12	9	10	17	-					
	# Best	# Unique																					
NT	RFTU	0	0	0	0	0	0	1	6	-	0	0	0	1	0	1	0	2	-				
		# Best	# Unique																				
	OEDD	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	1	-			
		# Best	# Unique																				
	EJDD	4	2	2	6	16	12	8	16	-	3	5	5	12	16	15	13	18	-				
		# Best	# Unique																				
EFMP	0	0	0	3	10	9	4	15	-	5	5	5	10	13	14	10	18	-					
	# Best	# Unique																					
EAMP	1	1	1	3	11	8	6	19	-	2	3	3	9	12	9	10	17	-					
	# Best	# Unique																					

Table D.28: (Unique) best order plan representations or dominance heuristics for  $T = 25$



		tbj = 0												tbj = 1											
		PC/BC	BC/SCT	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU	PC/BC	BC/SCT	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU	PC/BC	BC/SCT	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU			
T	RFTU	-	-	20	20	3926	3277	4229	3977	-	-	20	20	2431	2180	2963	2493	-	-	20	20	20	20		
	OEDD	18	6	16	18	18	17	18	-	20	8	19	19	19	19	19	-	20	8	19	19	19	19		
	EJDD	51	8	79	98	94	93	99	-	144	5	165	146	155	149	167	-	4.7	0.1	5.7	5.0	5.3	5.0		
NT	EFMP	3.3	0.5	4.7	5.6	5.5	5.1	5.6	-	4.7	0.1	5.7	5.0	5.3	5.0	5.8	-	15	4	13	14	14	14		
	EJDD	13	7	18	18	19	17	19	-	30	5	54	63	63	58	64	-	1.0	0.2	1.8	2.1	2.1	1.9		
	EAMP	0.9	0.6	4.2	7.9	7.4	6.6	8.0	-	1.0	0.2	1.8	2.1	2.1	1.9	2.1	-	18	9	18	19	19	17		
T	RFTU	18	14	20	19	19	19	20	-	61	12	36	72	66	42	74	-	2.0	0.4	1.3	2.5	2.3	1.5		
	OEDD	52	27	79	185	169	84	197	-	61	12	36	72	66	42	74	-	19	10	18	19	19	17		
	EJDD	4.1	1.8	6.7	14.8	14.0	7.0	16.0	-	2.0	0.4	1.3	2.5	2.3	1.5	2.5	-	69	14	52	89	78	56		
NT	EFMP	17	13	15	17	17	16	17	-	2.2	0.5	1.8	3.2	2.7	1.9	3.3	-	19	10	18	19	19	17		
	EJDD	53	15	67	131	136	92	132	-	69	14	52	89	78	56	93	-	2.2	0.5	1.8	3.2	2.7	1.9		
	EAMP	4.2	1.1	5.3	9.4	9.3	6.8	9.4	-	2.2	0.5	1.8	3.2	2.7	1.9	3.3	-	19	10	18	19	19	17		
T	RFTU	-	-	20	20	3983	3302	4295	4050	-	-	20	20	2419	2159	2950	2480	-	-	20	20	20	20		
	OEDD	18	7	15	17	17	16	17	-	20	8	19	19	19	19	19	-	20	8	19	19	19	19		
	EJDD	47	10	76	87	87	81	87	-	145	3	169	151	165	158	171	-	4.8	0.1	5.6	5.0	5.5	5.2		
NT	EFMP	2.9	0.5	4.0	5.1	5.1	4.6	5.1	-	4.8	0.1	5.6	5.0	5.5	5.2	5.8	-	14	4	13	14	14	14		
	EJDD	11	7	18	18	19	17	19	-	14	4	13	14	14	14	14	-	30	5	54	63	63	57		
	EAMP	0.6	0.6	4.2	6.6	6.2	5.8	6.7	-	1.1	0.2	1.8	2.1	2.1	1.9	2.1	-	1.1	0.2	1.8	2.1	2.1	1.9		

Table 29: Impact of order plan representations and dominance heuristics for  $T = 30$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
T	RFTU	-	-	0	2	0	0	0	15	3	-	-	0	1	0	0	0	19	0				
		# Best																					
		# Unique																					
	OEDD	2	2	2	13	17	17	15	19	-	0	0	1	15	9	11	8	15	-				
		# Best																					
		# Unique																					
	EJDD	3	0	1	3	11	10	10	15	-	1	5	6	11	16	17	13	20	-				
		# Best																					
		# Unique																					
	EFMP	0	0	0	2	7	6	1	16	-	1	1	1	7	11	11	8	15	-				
	# Best																						
	# Unique																						
EAMP	1	2	3	5	11	13	4	13	-	0	0	0	5	10	9	3	16	-					
	# Best																						
	# Unique																						
RFTU	-	-	0	2	0	0	0	15	3	-	-	0	1	0	0	0	19	0					
	# Best																						
	# Unique																						
OEDD	2	2	3	12	18	18	14	19	-	0	0	1	15	8	10	8	16	-					
	# Best																						
	# Unique																						
EJDD	3	0	1	4	12	10	8	16	-	1	5	6	11	16	17	12	20	-					
	# Best																						
	# Unique																						
EFMP	0	0	0	3	9	8	2	14	-	1	1	1	7	11	11	8	15	-					
	# Best																						
	# Unique																						
EAMP	1	1	1	4	9	11	2	13	-	0	0	0	4	13	10	4	18	-					
	# Best																						
	# Unique																						

Table D.30: (Unique) best order plan representations or dominance heuristics for  $T = 30$



Table D.31: Objective values compared to best objective value among combinations for  
 $T = 5$

		tbj = 0										tbj = 1									
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU		
T	RFTU	-	-	84.7	65.8	71.8	65.0	71.0	57.0	63.0	-	-	65.7	38.3	37.5	37.0	41.4	21.2	35.6		
	# Best	-	-	0	0	0	0	0	2	0	-	-	0	0	0	0	0	4	1		
	# Unique	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	1	0		
T	OEDD	44.6	43.3	43.3	39.2	39.2	39.2	39.2	39.2	-	25.4	22.4	22.3	18.8	19.1	19.1	19.1	18.8	-		
	# Best	2	2	2	2	2	2	2	2	-	1	1	1	3	3	3	3	3	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
T	EJDD	26.1	25.2	25.2	21.6	17.0	17.6	19.9	16.9	-	21.9	21.3	20.9	19.6	19.6	19.6	19.8	19.4	-		
	# Best	6	6	6	6	7	7	7	7	-	1	1	1	1	1	1	1	1	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
T	EFMP	41.2	36.5	36.0	29.9	28.6	29.0	30.0	28.3	-	16.3	15.3	15.2	14.3	13.8	13.8	14.3	13.8	-		
	# Best	3	3	3	4	4	4	4	5	-	1	3	3	4	5	5	4	5	-		
	# Unique	0	0	0	0	0	0	0	1	-	0	0	0	0	0	0	0	0	-		
T	EAMP	24.9	22.9	22.2	18.7	17.6	17.6	18.4	17.3	-	13.9	12.8	12.7	11.7	11.2	11.2	11.7	11.2	-		
	# Best	5	5	5	7	7	8	6	8	-	4	6	6	7	8	8	7	8	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	RFTU	-	-	85.0	66.9	72.2	65.0	70.2	55.2	62.5	-	-	65.3	37.7	36.4	36.6	40.2	20.9	34.6		
	# Best	-	-	0	0	0	0	0	3	0	-	-	0	0	0	0	0	3	1		
	# Unique	-	-	0	0	0	0	0	1	0	-	-	0	0	0	0	0	0	0		
NT	OEDD	46.7	46.1	46.1	41.5	41.5	41.4	41.5	41.5	-	23.9	20.3	20.3	17.5	17.6	17.6	17.6	17.5	-		
	# Best	2	2	2	2	2	2	2	2	-	1	1	1	5	5	5	5	5	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	EJDD	23.3	22.0	22.0	18.6	13.7	14.5	16.2	13.6	-	22.7	22.3	21.9	20.6	20.5	20.5	20.8	20.4	-		
	# Best	7	7	7	7	9	9	8	10	-	1	2	2	2	2	2	2	2	-		
	# Unique	0	0	0	0	0	0	0	1	-	0	0	0	0	0	0	0	0	-		
NT	EFMP	37.5	35.9	35.5	31.7	31.3	31.6	31.9	31.1	-	15.7	14.5	14.2	13.2	13.0	13.0	13.0	12.9	-		
	# Best	4	4	4	5	4	4	5	4	-	1	3	3	5	6	6	5	7	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	EAMP	23.2	21.2	20.7	16.0	14.5	14.4	15.6	14.2	-	13.0	11.9	11.9	10.8	9.9	9.9	10.5	9.9	-		
	# Best	5	5	5	8	9	11	7	10	-	3	5	5	6	7	7	6	7	-		
	# Unique	0	0	0	0	0	1	0	0	-	0	0	0	0	0	0	0	0	-		

Table D.32: Objective values compared to best objective value among combinations for

$$T = 10$$

		tbj = 0										tbj = 1									
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU		
T	RFTU	-	-	86.0	64.9	69.7	63.5	70.7	55.2	62.0	-	-	64.0	35.4	33.7	33.2	36.4	14.9	31.5		
	# Best	-	-	0	0	0	0	0	1	0	-	-	0	0	0	0	0	7	0		
	# Unique	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	1	0		
T	OEDD	43.4	37.5	37.4	35.2	35.0	35.1	35.1	35.0	-	23.2	19.3	19.1	14.0	14.1	14.1	14.0	14.0	-		
	# Best	3	4	4	4	4	4	4	4	-	0	1	1	4	4	4	4	4	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
T	EJDD	43.7	43.4	43.0	40.9	39.0	39.5	39.4	38.9	-	18.4	16.8	16.5	15.2	14.9	14.9	15.1	14.9	-		
	# Best	4	4	4	4	4	4	4	4	-	0	0	0	0	0	0	0	0	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
T	EFMP	46.0	38.9	38.6	36.1	32.9	33.4	35.7	32.7	-	14.3	13.2	12.7	11.2	10.5	10.5	10.7	10.5	-		
	# Best	2	3	3	3	4	3	3	4	-	0	0	0	2	3	2	3	3	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
T	EAMP	34.4	32.7	32.4	28.8	19.7	19.6	26.2	19.5	-	17.0	14.9	14.8	13.8	13.3	13.3	13.7	13.3	-		
	# Best	4	4	4	5	10	10	6	10	-	0	0	0	0	2	2	0	2	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	RFTU	-	-	86.0	64.9	69.8	63.4	71.0	55.8	61.0	-	-	63.8	35.9	33.4	32.9	36.1	14.2	31.1		
	# Best	-	-	0	0	0	0	0	2	0	-	-	0	0	0	0	0	7	0		
	# Unique	-	-	0	0	0	0	0	1	0	-	-	0	0	0	0	0	1	0		
NT	OEDD	42.4	36.8	36.8	34.4	34.1	34.1	34.3	34.0	-	23.6	19.6	19.2	14.0	14.2	14.2	14.0	14.1	-		
	# Best	3	4	4	4	4	4	4	4	-	0	0	0	4	4	4	4	4	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	EJDD	42.7	42.5	42.4	40.2	37.9	38.8	38.2	38.0	-	18.2	16.4	16.2	14.8	14.5	14.5	14.8	14.5	-		
	# Best	4	4	4	4	4	4	4	4	-	1	1	1	1	1	1	1	1	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	EFMP	45.2	42.7	42.3	40.1	37.9	38.3	39.8	37.7	-	14.6	13.5	13.0	11.7	11.1	11.1	11.2	11.1	-		
	# Best	3	3	3	3	6	5	3	7	-	0	0	0	2	3	2	3	3	-		
	# Unique	0	0	0	0	0	0	0	1	-	0	0	0	0	0	0	0	0	-		
NT	EAMP	42.5	40.7	40.6	36.8	28.2	28.3	34.3	28.1	-	17.0	14.9	14.8	13.8	13.3	13.3	13.7	13.3	-		
	# Best	3	3	3	4	6	6	5	6	-	0	0	0	0	2	2	0	2	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		

Table D.33: Objective values compared to best objective value among combinations for

$$T = 15$$



		tbj = 0										tbj = 1									
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU		
T	RFTU	-	-	85.0	61.5	64.1	58.3	69.4	48.9	55.4	-	-	60.0	29.2	26.2	25.2	33.9	10.2	24.5		
	# Best	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	7	0	
	# Unique	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	
T	OEDD	51.0	47.9	47.8	44.5	43.9	43.9	44.1	43.8	-	23.1	19.8	19.8	14.3	14.4	14.2	14.3	13.7	-		
	# Best	0	0	0	1	1	1	1	1	-	0	0	0	1	0	0	0	2	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
T	EJDD	44.6	43.3	43.1	40.5	37.0	37.8	38.7	37.0	-	16.8	15.9	15.8	14.8	13.8	13.8	14.2	13.7	-		
	# Best	0	1	1	1	2	1	1	2	-	0	0	0	0	0	0	0	0	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
T	EFMP	41.1	37.2	36.3	28.6	18.9	21.5	28.2	18.6	-	15.5	13.7	13.4	12.4	11.7	11.9	12.1	11.4	-		
	# Best	0	0	0	1	5	4	1	6	-	0	0	0	2	5	4	3	6	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
T	EAMP	31.7	27.4	25.7	22.0	14.3	14.3	17.6	13.9	-	12.4	10.4	10.1	8.7	8.4	8.5	8.6	8.3	-		
	# Best	1	1	1	2	4	6	4	6	-	0	2	2	4	5	5	5	5	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	RFTU	-	-	85.1	61.0	64.5	58.2	69.2	48.6	54.6	-	-	59.8	29.0	26.2	25.2	33.9	10.0	24.4		
	# Best	-	-	0	2	0	0	0	0	0	-	-	0	0	0	0	0	7	0		
	# Unique	-	-	0	2	0	0	0	0	0	-	-	0	0	0	0	0	0	0		
NT	OEDD	49.5	46.2	46.1	42.8	42.1	42.1	42.4	42.1	-	23.2	19.8	19.7	14.3	14.2	14.0	14.2	13.6	-		
	# Best	0	0	0	1	1	1	1	1	-	0	0	0	1	0	0	0	2	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	EJDD	43.4	42.1	41.9	39.3	34.9	36.2	37.3	34.9	-	16.8	15.9	15.9	14.7	13.9	13.9	14.3	13.8	-		
	# Best	0	1	1	1	2	1	1	2	-	0	0	0	0	0	0	0	0	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	EFMP	40.2	37.1	36.1	26.4	18.6	21.3	26.4	17.9	-	15.1	13.2	12.9	11.9	11.4	11.4	11.8	11.2	-		
	# Best	0	0	0	1	2	1	1	4	-	0	0	0	2	4	3	2	5	-		
	# Unique	0	0	0	0	0	0	0	1	-	0	0	0	1	0	0	0	0	-		
NT	EAMP	31.6	27.5	25.9	22.1	15.1	15.2	18.6	14.7	-	12.2	10.3	10.0	8.6	8.3	8.4	8.6	8.2	-		
	# Best	1	1	1	2	4	6	4	6	-	0	2	2	4	5	5	5	5	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		

Table D.34: Objective values compared to best objective value among combinations for

$$T = 20$$

		tbj = 0										tbj = 1									
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU		
T	RFTU	-	-	83.5	58.2	59.8	53.3	66.2	44.6	51.7	-	-	57.5	26.3	25.6	25.1	30.3	10.4	23.2		
	# Best	-	-	0	0	0	0	0	1	0	-	-	0	0	0	0	0	0	7	0	
	# Unique	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	
T	OEDD	41.6	40.0	39.4	35.5	34.7	35.0	34.9	34.7	-	21.5	17.3	17.1	13.1	13.3	13.1	13.3	12.7	-		
	# Best	0	0	0	1	1	1	1	1	-	0	0	0	0	0	0	0	0	0	-	
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-	
T	EJDD	41.2	41.1	40.7	37.8	35.9	36.2	36.8	35.3	-	17.8	17.3	17.2	15.6	15.2	15.3	15.5	15.1	-		
	# Best	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-	
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-	
T	EFMP	39.3	35.3	34.8	26.8	21.7	22.2	26.3	20.1	-	12.3	10.9	10.5	8.8	8.0	8.2	8.8	7.9	-		
	# Best	0	0	0	2	3	2	2	5	-	0	0	0	3	4	5	3	6	-		
	# Unique	0	0	0	0	1	0	0	1	-	0	0	0	0	0	0	0	0	0	-	
T	EAMP	33.7	30.9	29.7	25.1	21.0	21.0	23.3	20.4	-	16.4	14.9	14.6	12.9	11.7	12.3	12.7	11.6	-		
	# Best	1	1	1	1	4	4	2	6	-	0	0	0	0	2	2	0	2	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-	
NT	RFTU	-	-	83.6	58.3	60.1	52.8	66.3	43.9	50.4	-	-	57.4	25.9	25.4	24.4	30.0	9.9	22.8		
	# Best	-	-	0	0	0	0	0	2	0	-	-	0	0	0	0	0	9	0		
	# Unique	-	-	0	0	0	0	0	1	0	-	-	0	0	0	0	0	2	0		
NT	OEDD	40.5	39.0	38.6	34.6	33.8	34.0	33.9	33.8	-	21.0	17.0	16.8	12.8	13.0	12.9	13.1	12.4	-		
	# Best	0	0	0	1	1	1	1	1	-	0	0	0	1	0	1	0	0	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	EJDD	40.5	40.9	40.7	37.9	36.3	36.6	37.0	36.3	-	17.7	17.2	17.1	15.6	15.1	15.2	15.4	15.0	-		
	# Best	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	EFMP	40.0	36.0	35.4	28.0	23.7	23.6	27.2	23.0	-	12.3	10.9	10.6	8.8	8.1	8.2	8.8	7.9	-		
	# Best	0	0	0	1	1	1	1	3	-	0	0	0	3	4	5	3	6	-		
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-		
NT	EAMP	32.6	28.1	26.8	21.2	18.0	17.8	19.8	16.8	-	16.0	14.6	14.3	12.7	11.6	12.1	12.4	11.5	-		
	# Best	1	1	1	1	4	3	3	9	-	0	0	0	0	2	2	0	2	-		
	# Unique	0	0	0	0	0	0	1	1	-	0	0	0	0	0	0	0	0	0	-	

Table D.35: Objective values compared to best objective value among combinations for

$$T = 25$$

		tbj = 0											tbj = 1										
		PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU				
T	RFTU	-	-	83.5	57.1	58.5	51.2	64.4	42.8	51.0	-	-	56.7	25.5	25.1	24.6	30.1	10.3	22.8				
	# Best	-	-	0	0	0	0	0	2	0	-	-	0	0	0	0	0	4	0				
	# Unique	-	-	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0				
T	OEDD	38.3	36.3	35.9	32.8	32.2	32.3	32.6	32.1	-	19.1	15.2	15.1	10.0	10.7	10.4	10.7	9.9	-				
	# Best	0	0	0	0	0	0	0	0	-	0	0	0	1	1	1	1	1	-				
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
T	EJDD	32.5	32.1	31.7	29.0	25.9	26.4	27.0	25.8	-	15.3	14.5	14.4	12.8	12.5	12.5	12.7	12.5	-				
	# Best	0	0	0	1	1	1	1	2	-	0	1	1	1	1	2	1	2	-				
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
T	EFMP	34.2	31.3	30.1	25.4	17.2	18.3	25.2	16.1	-	12.0	10.2	9.8	8.6	7.4	7.6	8.4	7.4	-				
	# Best	0	0	0	0	2	1	0	5	-	1	1	1	1	3	2	1	4	-				
	# Unique	0	0	0	0	0	0	0	1	-	0	0	0	0	0	0	0	0	-				
T	EAMP	34.2	31.5	30.7	26.8	23.4	23.5	25.7	23.4	-	12.9	11.0	10.5	8.9	7.6	8.0	8.8	7.5	-				
	# Best	0	0	0	0	1	1	0	2	-	0	0	0	2	1	1	0	2	-				
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	1	0	0	0	0	-				
NT	RFTU	-	-	83.5	57.5	58.7	51.0	64.5	41.8	50.1	-	-	56.4	25.5	24.5	23.9	29.8	9.4	22.2				
	# Best	-	-	0	0	0	0	0	3	0	-	-	0	0	0	0	0	6	0				
	# Unique	-	-	0	0	0	0	0	1	0	-	-	0	0	0	0	0	2	0				
NT	OEDD	35.8	33.8	33.4	30.6	29.6	29.6	30.0	29.6	-	19.6	15.5	15.5	10.4	11.0	10.6	10.8	10.3	-				
	# Best	0	0	0	0	1	1	1	1	-	0	0	0	1	0	0	1	1	-				
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
NT	EJDD	31.2	30.9	30.5	27.6	25.6	26.0	26.4	25.6	-	15.3	14.4	14.3	12.7	12.4	12.4	12.6	12.4	-				
	# Best	0	0	0	1	0	1	0	1	-	0	0	0	0	0	1	0	1	-				
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-				
NT	EFMP	33.5	31.0	30.4	23.8	16.4	17.1	23.4	15.6	-	11.7	9.9	9.5	7.9	6.8	6.9	7.8	6.7	-				
	# Best	0	0	0	1	1	1	1	3	-	1	1	1	1	3	3	1	4	-				
	# Unique	0	0	0	0	0	0	0	0	-	0	0	0	0	0	1	0	0	-				
NT	EAMP	28.7	25.3	24.5	20.5	15.7	15.9	18.6	15.2	-	11.7	9.9	9.5	8.0	6.7	7.2	7.9	6.6	-				
	# Best	0	0	0	0	4	3	0	5	-	0	0	0	2	2	2	1	3	-				
	# Unique	0	0	0	0	0	1	0	1	-	0	0	0	0	0	0	0	0	-				

Table D.36: Objective values compared to best objective value among combinations for

$$T = 30$$

## D.2 Number of machine groups

- X/Y = indicates that we compare objective value in Variant Y with objective value in Variant X;
- # Impr = number of times Variant Y improves Variant X;
- Avg % Diff = average proportional difference between objective values found by Variant Y and Variant X as compared to the objective values found by Variant X;

			PC/BC	BC/SCT	SCT/FD	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU
RFTU	u=3	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	60.6	55.1	60.9	52.7	69.8	62.6
	u=5	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	52.5	51.3	55.1	48.7	63.3	57.3
	u=7	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	49.6	48.2	51.3	43.8	59.5	53.5
EODD	u=3	# Impr	183	40	176	180	180	179	181	-
		Avg % Diff	7.6	0.3	12.9	13.6	13.6	13.3	13.9	-
	u=5	# Impr	171	42	165	172	172	170	173	-
		Avg % Diff	4.3	0.3	5.0	5.3	5.3	5.2	5.5	-
	u=7	# Impr	154	25	137	132	132	134	144	-
		Avg % Diff	1.9	0.1	2.1	2.1	2.1	2.1	2.3	-
EJDD	u=3	# Impr	111	12	145	176	174	167	176	-
		Avg % Diff	4.5	0.1	7.4	16.3	15.6	13.7	16.6	-
	u=5	# Impr	122	38	134	149	146	142	152	-
		Avg % Diff	1.5	0.3	2.8	5.9	5.5	4.8	6.0	-
	u=7	# Impr	101	28	94	116	113	104	117	-
		Avg % Diff	0.6	0.1	1.1	2.3	1.8	1.9	2.4	-
EFMP	u=3	# Impr	178	49	141	174	174	147	176	-
		Avg % Diff	6.8	0.5	5.6	17.2	16.6	6.4	17.9	-
	u=5	# Impr	161	71	154	165	165	152	169	-
		Avg % Diff	4.1	0.6	3.9	7.4	6.9	4.4	7.7	-
	u=7	# Impr	130	54	136	162	163	144	165	-
		Avg % Diff	1.7	0.6	2.8	4.2	4.2	3.0	4.3	-
EAMP	u=3	# Impr	168	64	141	169	170	156	175	-
		Avg % Diff	6.2	1.2	5.0	13.3	12.8	8.8	13.7	-
	u=5	# Impr	158	75	135	157	159	142	160	-
		Avg % Diff	2.8	0.7	3.4	5.8	5.7	4.4	6.0	-
	u=7	# Impr	123	58	128	158	159	141	162	-
		Avg % Diff	1.1	0.5	2.7	4.2	4.2	3.3	4.3	-

Table D.37: Impact of order plan representations and dominance heuristics for the T Variant



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X/Y	=	indicates that we compare objective value in Variant Y with objective value in Variant X;
# Impr	=	number of times Variant Y improves Variant X;
Avg % Diff	=	average proportional difference between objective values found by Variant Y and Variant X as compared to the objective values found by Variant X;

			PC/BC	BC/SCT	SCT/FD	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU
RFTU	u=3	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	60.6	55.1	60.9	52.7	69.8	62.6
	u=5	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	52.5	51.3	55.1	48.7	63.3	57.3
	u=7	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	49.6	48.2	51.3	43.8	59.5	53.5
EODD	u=3	# Impr	185	35	174	179	179	177	179	-
		Avg % Diff	7.6	0.3	12.2	12.6	12.6	12.3	12.8	-
	u=5	# Impr	173	45	165	172	173	171	174	-
		Avg % Diff	4.2	0.3	4.9	5.2	5.3	5.1	5.4	-
	u=7	# Impr	153	25	139	130	133	135	144	-
		Avg % Diff	2.1	0.1	2.1	2.0	2.0	2.0	2.3	-
EJDD	u=3	# Impr	107	15	147	175	172	167	175	-
		Avg % Diff	4.1	0.1	6.8	15.3	14.5	12.5	15.6	-
	u=5	# Impr	118	37	138	152	150	144	155	-
		Avg % Diff	1.7	0.2	2.9	6.0	5.5	4.9	6.0	-
	u=7	# Impr	102	27	91	110	108	98	111	-
		Avg % Diff	0.5	0.1	1.0	1.9	1.7	1.4	1.9	-
EFMP	u=3	# Impr	175	44	143	174	175	149	176	-
		Avg % Diff	6.8	0.4	5.8	17.1	16.6	6.6	17.7	-
	u=5	# Impr	156	69	153	163	165	150	168	-
		Avg % Diff	3.1	0.6	3.9	7.1	6.7	4.4	7.4	-
	u=7	# Impr	127	55	135	161	163	145	164	-
		Avg % Diff	1.8	0.5	2.8	4.5	4.4	3.1	4.6	-
EAMP	u=3	# Impr	171	62	142	164	165	155	169	-
		Avg % Diff	6.3	1.1	5.1	13.3	12.7	9.4	13.6	-
	u=5	# Impr	155	69	134	158	160	143	163	-
		Avg % Diff	3.0	0.6	3.5	5.9	5.8	4.4	6.2	-
	u=7	# Impr	123	65	123	156	157	136	158	-
		Avg % Diff	1.2	1.1	2.5	4.3	4.2	2.9	4.4	-

Table D.38: Impact of order plan representations and dominance heuristics for the NT Variant

			PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	
T	RFTU	u=3	-	-	0	37	10	11	6	172	27	
		u=5	-	-	0	20	0	3	8	185	28	
		u=7	-	-	0	3	1	4	3	202	31	
	EODD	u=3	49	58	59	190	215	208	200	229	-	
		u=5	51	64	67	187	195	196	184	223	-	
		u=7	64	92	96	201	198	198	198	230	-	
	EJDD	u=3	54	64	64	90	209	190	133	222	-	
		u=5	73	83	85	122	198	179	154	219	-	
		u=7	102	111	112	162	210	196	180	223	-	
	EFMP	u=3	43	59	64	81	176	157	81	210	-	
		u=5	55	68	71	117	173	161	121	215	-	
		u=7	55	69	74	131	179	187	135	205	-	
	EAMP	u=3	50	62	65	98	199	184	120	224	-	
		u=5	53	74	80	121	180	175	130	213	-	
		u=7	51	71	77	132	187	191	149	211	-	
	NT	RFTU	u=3	-	-	0	35	7	12	8	175	30
			u=5	-	-	0	21	2	4	4	187	27
			u=7	-	-	0	2	1	4	3	209	27
EODD		u=3	48	59	61	194	212	207	199	227	-	
		u=5	51	62	66	184	194	196	181	222	-	
		u=7	65	92	96	204	195	198	198	230	-	
EJDD		u=3	56	65	65	90	208	183	132	228	-	
		u=5	73	77	79	123	202	177	152	219	-	
		u=7	103	110	111	160	207	191	174	218	-	
EFMP		u=3	43	61	64	85	182	164	81	213	-	
		u=5	57	68	71	115	170	161	118	210	-	
		u=7	56	70	75	130	180	184	135	205	-	
EAMP		u=3	49	68	71	98	197	185	125	220	-	
		u=5	55	73	77	123	178	170	128	218	-	
		u=7	51	72	81	132	191	192	144	213	-	

Table D.39: Best order plan representations or dominance heuristics

- Avg % Diff = average proportional difference of the objective values of the combinations with regard to the best known objective values among the combinations;
- # Best = number of times a combination has the best known objective value among the combinations;

			PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU
RFTU	u=3	Avg % Diff	-	-	82.1	59.6	61.5	56.8	65.8	44.7	55.5
		# Best	-	-	0	2	6	6	2	40	11
	u=5	Avg % Diff	-	-	72.4	46.7	48.1	44.4	50.7	32.3	42.1
		# Best	-	-	0	3	0	0	1	40	2
	u=7	Avg % Diff	-	-	67.0	38.6	39.3	36.4	44.4	23.7	33.2
		# Best	-	-	0	0	0	0	2	53	5
EODD	u=3	Avg % Diff	40.8	36.8	36.6	27.4	26.6	26.6	26.9	26.4	-
		# Best	38	39	39	58	63	63	61	64	-
	u=5	Avg % Diff	31.7	28.6	28.5	24.6	24.5	24.5	24.6	24.3	-
		# Best	11	14	14	27	27	27	27	29	-
	u=7	Avg % Diff	24.0	22.5	22.4	20.7	20.7	20.7	20.7	20.5	-
		# Best	10	13	13	20	19	19	20	20	-
EJDD	u=3	Avg % Diff	33.2	30.7	30.6	25.2	17.3	18.2	20.0	16.8	-
		# Best	43	47	47	51	81	73	66	84	-
	u=5	Avg % Diff	27.4	26.6	26.4	24.5	22.9	23.2	23.7	22.8	-
		# Best	16	19	19	20	24	24	22	26	-
	u=7	Avg % Diff	20.5	20.0	20.0	19.1	18.0	18.6	18.4	18.0	-
		# Best	16	16	16	23	26	23	27	28	-
EFMP	u=3	Avg % Diff	38.9	35.3	35.0	32.3	23.5	24.4	31.6	22.6	-
		# Best	35	41	41	43	65	66	44	73	-
	u=5	Avg % Diff	25.5	22.8	22.4	19.3	16.5	17.0	19.1	16.2	-
		# Best	18	23	23	35	52	46	37	63	-
	u=7	Avg % Diff	18.7	17.3	16.9	14.5	13.3	13.3	14.3	13.2	-
		# Best	15	18	22	36	50	50	38	57	-
EAMP	u=3	Avg % Diff	35.7	31.5	31.0	27.5	20.6	21.4	24.5	20.4	-
		# Best	41	44	44	49	79	70	59	80	-
	u=5	Avg % Diff	22.1	19.9	19.4	17.1	14.7	14.8	16.2	14.5	-
		# Best	25	31	31	42	58	61	44	65	-
	u=7	Avg % Diff	17.4	16.5	16.1	13.8	12.5	12.5	13.3	12.4	-
		# Best	14	20	21	36	46	50	40	52	-

Table D.40: Objective values compared to best objective value among combinations for T Variant

- Avg % Diff = average proportional difference of the objective values of the combinations with regard to the best known objective values among the combinations;
- # Best = number of times a combination has the best known objective value among the combinations;

			PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU
RFTU	u=3	Avg % Diff	-	-	82.0	59.3	62.3	56.8	65.2	44.0	54.9
		# Best	-	-	0	2	5	6	3	54	8
	u=5	Avg % Diff	-	-	72.4	46.7	47.9	43.9	50.5	31.3	41.4
		# Best	-	-	0	6	0	0	1	48	2
	u=7	Avg % Diff	-	-	67.0	38.7	38.9	35.6	44.3	23.1	32.1
		# Best	-	-	0	0	1	0	2	48	5
EODD	u=3	Avg % Diff	41.4	37.1	36.9	28.8	28.3	28.3	28.5	28.1	-
		# Best	37	39	39	55	58	58	56	60	-
	u=5	Avg % Diff	31.4	28.3	28.2	24.4	24.2	24.1	24.3	24.0	-
		# Best	11	13	13	27	26	27	27	29	-
	u=7	Avg % Diff	24.1	22.4	22.3	20.7	20.8	20.7	20.7	20.5	-
		# Best	10	13	13	22	18	18	21	21	-
EJDD	u=3	Avg % Diff	33.6	31.5	31.4	26.5	19.4	20.2	22.2	18.9	-
		# Best	44	48	48	51	79	70	61	82	-
	u=5	Avg % Diff	26.3	25.2	25.1	23.0	21.1	21.6	21.9	21.1	-
		# Best	21	24	24	25	32	32	28	35	-
	u=7	Avg % Diff	20.8	20.4	20.3	19.5	18.8	19.0	19.2	18.8	-
		# Best	17	18	18	24	25	24	26	26	-
EFMP	u=3	Avg % Diff	38.8	35.2	34.9	31.9	23.2	24.0	31.3	22.3	-
		# Best	35	40	40	42	67	67	43	75	-
	u=5	Avg % Diff	25.8	23.8	23.4	20.3	18.1	18.5	20.1	17.8	-
		# Best	18	22	22	35	46	43	36	58	-
	u=7	Avg % Diff	19.5	18.1	17.8	15.4	14.0	14.0	15.1	13.8	-
		# Best	12	15	18	28	45	45	33	52	-
EAMP	u=3	Avg % Diff	36.7	32.5	31.9	28.4	21.8	22.5	24.7	21.2	-
		# Best	37	41	41	46	68	64	56	71	-
	u=5	Avg % Diff	22.2	19.9	19.4	16.9	14.4	14.6	16.0	14.2	-
		# Best	23	29	29	41	59	61	45	69	-
	u=7	Avg % Diff	17.6	16.6	15.6	13.5	11.7	11.8	13.1	11.7	-
		# Best	12	18	22	35	48	49	36	52	-

Table D.41: Objective values compared to best objective value among combinations for NT Variant

### D.3 Utilization rates of the regular machine group capacities

- X/Y = indicates that we compare objective value in Variant Y with objective value in Variant X;
- # Impr = number of times Variant Y improves Variant X;
- Avg % Diff = average proportional difference between objective values found by Variant Y and Variant X as compared to the objective values found by Variant X;



			PC/BC	BC/SCT	SCT/FD	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU
RFTU	UM=70	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	63.3	55.6	61.8	56.2	71.6	64.9
	UM=80	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	52.5	51.3	55.1	48.7	63.3	57.3
	UM=90	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	47.5	44.7	47.9	41.0	55.8	49.7
EODD	UM=70	# Impr	166	36	174	177	176	176	177	-
		Avg % Diff	6.6	0.6	12.9	13.4	13.3	13.3	13.8	-
	UM=80	# Impr	171	42	165	172	172	170	173	-
		Avg % Diff	4.3	0.3	5.0	5.3	5.3	5.2	5.5	-
	UM=90	# Impr	172	30	137	141	141	143	144	-
		Avg % Diff	2.8	0.1	1.7	1.7	1.7	1.8	1.9	-
EJDD	UM=70	# Impr	135	14	148	159	161	161	164	-
		Avg % Diff	3.5	0.2	6.5	15.5	14.0	13.0	15.8	-
	UM=80	# Impr	122	38	134	149	146	142	152	-
		Avg % Diff	1.5	0.3	2.8	5.9	5.5	4.8	6.0	-
	UM=90	# Impr	123	17	92	106	102	102	109	-
		Avg % Diff	0.9	0.1	1.1	1.8	1.7	1.5	1.8	-
EFMP	UM=70	# Impr	166	42	160	188	186	162	189	-
		Avg % Diff	5.9	0.7	9.2	20.8	20.4	10.0	21.2	-
	UM=80	# Impr	161	71	154	165	165	152	169	-
		Avg % Diff	4.1	0.6	3.9	7.4	6.9	4.4	7.7	-
	UM=90	# Impr	150	58	156	173	174	162	179	-
		Avg % Diff	1.7	0.3	3.0	4.1	4.4	2.8	4.7	-
EAMP	UM=70	# Impr	156	63	148	176	178	165	179	-
		Avg % Diff	5.5	1.3	7.6	15.1	15.1	10.0	15.4	-
	UM=80	# Impr	158	75	135	157	159	142	160	-
		Avg % Diff	2.8	0.7	3.4	5.8	5.7	4.4	6.0	-
	UM=90	# Impr	153	58	151	172	175	160	179	-
		Avg % Diff	1.8	0.4	3.3	4.1	4.5	3.4	4.7	-

Table D.42: Impact of order plan representations and dominance heuristics for the T Variant

X/Y	=	indicates that we compare objective value in Variant Y with objective value in Variant X;
# Impr	=	number of times Variant Y improves Variant X;
Avg % Diff	=	average proportional difference between objective values found by Variant Y and Variant X as compared to the objective values found by Variant X;

			PC/BC	BC/SCT	SCT/FD	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU
RFTU	UM=70	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	63.3	55.6	61.8	56.2	71.6	64.9
	UM=80	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	52.5	51.3	55.1	48.7	63.3	57.3
	UM=90	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	47.5	44.7	47.9	41.0	55.8	49.7
EODD	UM=70	# Impr	165	34	174	177	177	176	177	-
		Avg % Diff	6.0	0.6	13.5	13.9	13.9	13.9	14.2	-
	UM=80	# Impr	173	45	165	172	173	171	174	-
		Avg % Diff	4.2	0.3	4.9	5.2	5.3	5.1	5.4	-
	UM=90	# Impr	169	29	138	142	142	144	145	-
		Avg % Diff	2.5	0.1	1.8	1.8	1.8	1.9	2.0	-
EJDD	UM=70	# Impr	129	16	145	159	160	158	162	-
		Avg % Diff	2.7	0.2	6.1	15.5	13.8	12.3	15.7	-
	UM=80	# Impr	118	37	138	152	150	144	155	-
		Avg % Diff	1.7	0.2	2.9	6.0	5.5	4.9	6.0	-
	UM=90	# Impr	125	17	93	106	103	103	107	-
		Avg % Diff	1.1	0.0	1.0	1.7	1.5	1.4	1.8	-
EFMP	UM=70	# Impr	170	47	159	188	186	160	189	-
		Avg % Diff	6.6	0.8	8.9	20.5	19.8	9.7	20.8	-
	UM=80	# Impr	156	69	153	163	165	150	168	-
		Avg % Diff	3.1	0.6	3.9	7.1	6.7	4.4	7.4	-
	UM=90	# Impr	151	60	155	173	172	157	179	-
		Avg % Diff	1.8	0.3	3.1	4.2	4.5	3.0	4.9	-
EAMP	UM=70	# Impr	145	69	150	176	179	163	180	-
		Avg % Diff	5.1	1.3	8.6	16.3	16.4	10.9	16.6	-
	UM=80	# Impr	155	69	134	158	160	143	163	-
		Avg % Diff	3.0	0.6	3.5	5.9	5.8	4.4	6.2	-
	UM=90	# Impr	152	57	148	174	175	157	178	-
		Avg % Diff	1.7	0.4	3.2	4.2	4.6	3.2	4.6	-

Table D.43: Impact of order plan representations and dominance heuristics for the NT Variant

			PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	
T	RFTU	UM=70	-	-	0	37	1	7	9	159	34	
		UM=80	-	-	0	20	0	3	8	185	28	
		UM=90	-	-	0	28	2	5	3	188	17	
	EODD	UM=70	51	61	63	186	206	197	202	223	-	
		UM=80	51	64	67	187	195	196	184	223	-	
		UM=90	54	87	96	208	209	212	211	229	-	
	EJDD	UM=70	69	73	73	106	208	176	147	228	-	
		UM=80	73	83	85	122	198	179	154	219	-	
		UM=90	91	110	114	159	186	178	168	202	-	
	EFMP	UM=70	40	51	51	85	189	170	88	221	-	
		UM=80	55	68	71	117	173	161	121	215	-	
		UM=90	51	57	61	122	159	173	121	212	-	
	EAMP	UM=70	48	59	61	106	196	187	122	219	-	
		UM=80	53	74	80	121	180	175	130	213	-	
		UM=90	49	61	61	122	156	168	130	211	-	
	NT	RFTU	UM=70	-	-	0	32	2	7	6	163	36
			UM=80	-	-	0	21	2	4	4	187	27
			UM=90	-	-	0	21	1	6	2	192	24
EODD		UM=70	51	62	63	189	207	200	205	225	-	
		UM=80	51	62	66	184	194	196	181	222	-	
		UM=90	55	87	95	212	206	212	209	227	-	
EJDD		UM=70	69	75	75	106	214	182	150	230	-	
		UM=80	73	77	79	123	202	177	152	219	-	
		UM=90	93	110	114	161	185	185	168	205	-	
EFMP		UM=70	43	51	51	89	188	176	94	219	-	
		UM=80	57	68	71	115	170	161	118	210	-	
		UM=90	50	57	60	124	153	175	123	207	-	
EAMP		UM=70	46	57	60	105	194	188	121	222	-	
		UM=80	55	73	77	123	178	170	128	218	-	
		UM=90	48	62	62	122	161	173	132	210	-	

Table D.44: Best order plan representations or dominance heuristics

- Avg % Diff = average proportional difference of the objective values of the combinations with regard to the best known objective values among the combinations;
- # Best = number of times a combination has the best known objective value among the combinations;

			PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU
RFTU	UM=70	Avg % Diff	-	-	83.6	60.1	65.0	60.2	66.1	48.3	56.9
		# Best	-	-	0	3	0	1	2	25	3
	UM=80	Avg % Diff	-	-	72.4	46.7	48.1	44.4	50.7	32.3	42.1
		# Best	-	-	0	3	0	0	1	40	2
	UM=90	Avg % Diff	-	-	64.5	36.1	39.7	36.3	43.0	25.0	34.4
		# Best	-	-	0	4	1	1	0	54	1
EODD	UM=70	Avg % Diff	43.2	39.4	39.2	30.4	29.9	30.1	30.0	29.7	-
		# Best	32	35	35	46	48	47	50	49	-
	UM=80	Avg % Diff	31.7	28.6	28.5	24.6	24.5	24.5	24.6	24.3	-
		# Best	11	14	14	27	27	27	27	29	-
	UM=90	Avg % Diff	22.1	19.8	19.7	18.3	18.3	18.2	18.2	18.1	-
		# Best	11	13	14	31	28	31	28	35	-
EJDD	UM=70	Avg % Diff	36.9	35.4	35.4	31.0	23.3	25.4	25.8	23.0	-
		# Best	41	44	44	49	69	61	59	71	-
	UM=80	Avg % Diff	27.4	26.6	26.4	24.5	22.9	23.2	23.7	22.8	-
		# Best	16	19	19	20	24	24	22	26	-
	UM=90	Avg % Diff	17.4	16.6	16.6	15.6	15.1	15.2	15.3	15.1	-
		# Best	13	23	24	30	30	32	30	33	-
EFMP	UM=70	Avg % Diff	40.3	36.6	36.2	30.1	21.5	21.3	29.7	21.2	-
		# Best	25	31	31	43	77	71	46	86	-
	UM=80	Avg % Diff	25.5	22.8	22.4	19.3	16.5	17.0	19.1	16.2	-
		# Best	18	23	23	35	52	46	37	63	-
	UM=90	Avg % Diff	19.7	18.3	18.1	15.6	14.7	14.5	15.8	14.2	-
		# Best	12	12	12	23	28	36	24	38	-
EAMP	UM=70	Avg % Diff	35.8	32.3	31.4	25.2	19.5	18.8	23.4	19.1	-
		# Best	34	37	37	53	71	71	58	78	-
	UM=80	Avg % Diff	22.1	19.9	19.4	17.1	14.7	14.8	16.2	14.5	-
		# Best	25	31	31	42	58	61	44	65	-
	UM=90	Avg % Diff	17.1	15.6	15.3	12.4	11.7	11.4	12.3	11.3	-
		# Best	18	19	19	38	44	46	44	55	-

Table D.45: Objective values compared to best objective value among combinations for T Variant

- Avg % Diff = average proportional difference of the objective values of the combinations with regard to the best known objective values among the combinations;
- # Best = number of times a combination has the best known objective value among the combinations;

			PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU
RFTU	UM=70	Avg % Diff	-	-	83.5	60.1	65.1	60.0	65.9	48.2	56.0
		# Best	-	-	0	3	0	1	1	28	3
	UM=80	Avg % Diff	-	-	72.4	46.7	47.9	43.9	50.5	31.3	41.4
		# Best	-	-	0	6	0	0	1	48	2
	UM=90	Avg % Diff	-	-	64.3	36.0	38.9	35.2	42.6	24.5	33.3
		# Best	-	-	0	3	1	1	0	55	1
EODD	UM=70	Avg % Diff	43.0	39.4	39.2	29.9	29.4	29.5	29.5	29.1	-
		# Best	32	35	35	45	48	48	48	50	-
	UM=80	Avg % Diff	31.4	28.3	28.2	24.4	24.2	24.1	24.3	24.0	-
		# Best	11	13	13	27	26	27	27	29	-
	UM=90	Avg % Diff	21.7	19.7	19.5	18.0	18.0	18.0	17.9	17.8	-
		# Best	14	15	15	31	29	31	28	35	-
EJDD	UM=70	Avg % Diff	36.2	35.0	34.9	30.7	23.1	25.0	26.1	22.9	-
		# Best	40	45	45	49	67	59	56	69	-
	UM=80	Avg % Diff	26.3	25.2	25.1	23.0	21.1	21.6	21.9	21.1	-
		# Best	21	24	24	25	32	32	28	35	-
	UM=90	Avg % Diff	17.3	16.4	16.4	15.5	15.0	15.1	15.2	14.9	-
		# Best	14	26	27	30	31	35	29	35	-
EFMP	UM=70	Avg % Diff	40.2	36.9	36.4	30.4	21.2	21.5	29.9	20.8	-
		# Best	27	30	30	42	75	72	45	85	-
	UM=80	Avg % Diff	25.8	23.8	23.4	20.3	18.1	18.5	20.1	17.8	-
		# Best	18	22	22	35	46	43	36	58	-
	UM=90	Avg % Diff	18.9	17.6	17.3	14.7	13.9	13.6	14.8	13.3	-
		# Best	16	16	16	27	31	37	29	41	-
EAMP	UM=70	Avg % Diff	35.2	31.8	30.9	24.2	17.7	17.0	22.3	17.4	-
		# Best	34	36	36	53	74	72	58	81	-
	UM=80	Avg % Diff	22.2	19.9	19.4	16.9	14.4	14.6	16.0	14.2	-
		# Best	23	29	29	41	59	61	45	69	-
	UM=90	Avg % Diff	17.4	16.0	15.7	12.9	12.1	11.8	12.9	11.7	-
		# Best	18	18	18	36	46	47	42	56	-

Table D.46: Objective values compared to best objective value among combinations for NT Variant



## D.4 Average order arrival rate

- X/Y = indicates that we compare objective value in Variant Y with objective value in Variant X;
- # Impr = number of times Variant Y improves Variant X;
- Avg % Diff = average proportional difference between objective values found by Variant Y and Variant X as compared to the objective values found by Variant X;

			PC/BC	BC/SCT	SCT/FD	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU
RFTU	$\lambda=0.5$	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	54.9	48.2	53.2	47.1	60.9	55.6
	$\lambda=1$	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	52.5	51.3	55.1	48.7	63.3	57.3
	$\lambda=2$	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	55.0	49.1	54.2	46.8	62.9	56.6
EODD	$\lambda=0.5$	# Impr	187	39	180	181	180	178	186	-
		Avg % Diff	4.9	0.2	5.8	5.8	5.9	5.8	6.0	-
	$\lambda=1$	# Impr	171	42	165	172	172	170	173	-
		Avg % Diff	4.3	0.3	5.0	5.3	5.3	5.2	5.5	-
	$\lambda=2$	# Impr	155	37	154	159	158	159	161	-
		Avg % Diff	3.7	0.3	5.4	6.0	5.8	5.9	6.1	-
EJDD	$\lambda=0.5$	# Impr	157	28	150	173	170	165	178	-
		Avg % Diff	3.0	0.1	3.5	6.2	5.7	5.4	6.3	-
	$\lambda=1$	# Impr	122	38	134	149	146	142	152	-
		Avg % Diff	1.5	0.3	2.8	5.9	5.5	4.8	6.0	-
	$\lambda=2$	# Impr	129	23	119	148	138	144	151	-
		Avg % Diff	2.9	0.5	2.5	6.9	6.1	5.3	6.9	-
EFMP	$\lambda=0.5$	# Impr	189	71	177	187	189	171	196	-
		Avg % Diff	4.4	0.6	5.0	9.4	9.3	5.1	10.0	-
	$\lambda=1$	# Impr	161	71	154	165	165	152	169	-
		Avg % Diff	4.1	0.6	3.9	7.4	6.9	4.4	7.7	-
	$\lambda=2$	# Impr	159	53	152	173	173	161	176	-
		Avg % Diff	5.0	0.7	5.8	10.3	10.1	7.0	11.1	-
EAMP	$\lambda=0.5$	# Impr	174	71	160	181	181	171	187	-
		Avg % Diff	3.5	0.9	5.0	9.1	8.9	6.2	9.6	-
	$\lambda=1$	# Impr	158	75	135	157	159	142	160	-
		Avg % Diff	2.8	0.7	3.4	5.8	5.7	4.4	6.0	-
	$\lambda=2$	# Impr	134	58	148	175	173	161	179	-
		Avg % Diff	2.8	0.6	5.6	9.9	9.9	7.1	10.1	-

Table D.47: Impact of order plan representations and dominance heuristics for the T Variant

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X/Y	=	indicates that we compare objective value in Variant Y with objective value in Variant X;
# Impr	=	number of times Variant Y improves Variant X;
Avg % Diff	=	average proportional difference between objective values found by Variant Y and Variant X as compared to the objective values found by Variant X;

			PC/BC	BC/SCT	SCT/FD	SCT/BD	SCT/FBD	SCT/MPD	SCT/DYD	SCT/FTU
RFTU	$\lambda=0.5$	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	54.9	48.2	53.2	47.1	60.9	55.6
	$\lambda=1$	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	52.5	51.3	55.1	48.7	63.3	57.3
	$\lambda=2$	# Impr	-	-	240	240	240	240	240	240
		Avg % Diff	-	-	55.0	49.1	54.2	46.8	62.9	56.6
EODD	$\lambda=0.5$	# Impr	183	39	173	177	176	171	181	-
		Avg % Diff	4.8	0.3	5.8	5.9	5.9	5.8	6.1	-
	$\lambda=1$	# Impr	173	45	165	172	173	171	174	-
		Avg % Diff	4.2	0.3	4.9	5.2	5.3	5.1	5.4	-
	$\lambda=2$	# Impr	156	36	154	157	155	156	161	-
		Avg % Diff	4.0	0.2	5.0	5.4	5.2	5.3	5.6	-
EJDD	$\lambda=0.5$	# Impr	150	26	155	172	170	168	177	-
		Avg % Diff	2.5	0.1	3.3	6.0	5.8	5.1	6.1	-
	$\lambda=1$	# Impr	118	37	138	152	150	144	155	-
		Avg % Diff	1.7	0.2	2.9	6.0	5.5	4.9	6.0	-
	$\lambda=2$	# Impr	127	25	118	148	137	144	150	-
		Avg % Diff	2.7	0.5	2.5	6.5	5.8	5.2	6.6	-
EFMP	$\lambda=0.5$	# Impr	191	79	178	185	186	173	195	-
		Avg % Diff	4.6	0.8	5.3	9.1	9.0	5.3	9.5	-
	$\lambda=1$	# Impr	156	69	153	163	165	150	168	-
		Avg % Diff	3.1	0.6	3.9	7.1	6.7	4.4	7.4	-
	$\lambda=2$	# Impr	159	51	150	176	176	163	178	-
		Avg % Diff	4.7	0.7	5.8	10.8	10.5	7.2	11.6	-
EAMP	$\lambda=0.5$	# Impr	173	79	166	185	185	173	191	-
		Avg % Diff	3.4	0.9	5.3	8.9	8.8	6.1	9.4	-
	$\lambda=1$	# Impr	155	69	134	158	160	143	163	-
		Avg % Diff	3.0	0.6	3.5	5.9	5.8	4.4	6.2	-
	$\lambda=2$	# Impr	132	56	144	173	172	159	174	-
		Avg % Diff	2.8	0.7	6.0	10.5	10.5	7.8	10.9	-

Table D.48: Impact of order plan representations and dominance heuristics for the NT Variant

			PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU	
T	RFTU	$\lambda=0.5$	-	-	0	26	3	8	1	172	34	
		$\lambda=1$	-	-	0	20	0	3	8	185	28	
		$\lambda=2$	-	-	0	25	1	3	0	181	32	
	EODD	$\lambda=0.5$	31	49	54	203	192	195	195	223	-	
		$\lambda=1$	51	64	67	187	195	196	184	223	-	
		$\lambda=2$	55	74	79	196	197	191	198	216	-	
	EJDD	$\lambda=0.5$	49	58	58	118	185	170	147	204	-	
		$\lambda=1$	73	83	85	122	198	179	154	219	-	
		$\lambda=2$	64	80	82	130	212	187	174	226	-	
	EFMP	$\lambda=0.5$	25	36	38	88	153	155	80	199	-	
		$\lambda=1$	55	68	71	117	173	161	121	215	-	
		$\lambda=2$	45	59	64	120	171	171	125	205	-	
	EAMP	$\lambda=0.5$	31	45	48	99	157	162	105	204	-	
		$\lambda=1$	53	74	80	121	180	175	130	213	-	
		$\lambda=2$	44	56	61	130	191	188	137	212	-	
	NT	RFTU	$\lambda=0.5$	-	-	0	21	5	8	2	172	38
			$\lambda=1$	-	-	0	21	2	4	4	187	27
			$\lambda=2$	-	-	0	22	1	4	1	180	36
EODD		$\lambda=0.5$	33	54	59	199	192	195	191	223	-	
		$\lambda=1$	51	62	66	184	194	196	181	222	-	
		$\lambda=2$	55	72	79	198	197	187	195	219	-	
EJDD		$\lambda=0.5$	51	59	59	117	181	172	147	203	-	
		$\lambda=1$	73	77	79	123	202	177	152	219	-	
		$\lambda=2$	69	83	85	130	216	188	176	229	-	
EFMP		$\lambda=0.5$	23	35	38	92	151	159	85	192	-	
		$\lambda=1$	57	68	71	115	170	161	118	210	-	
		$\lambda=2$	42	56	62	120	180	177	125	210	-	
EAMP		$\lambda=0.5$	28	40	44	97	162	164	105	205	-	
		$\lambda=1$	55	73	77	123	178	170	128	218	-	
		$\lambda=2$	45	60	66	128	194	188	144	217	-	

Table D.49: Best order plan representations or dominance heuristics

- Avg % Diff = average proportional difference of the objective values of the combinations with regard to the best known objective values among the combinations;
- # Best = number of times a combination has the best known objective value among the combinations;

			PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU
RFTU	$\lambda=0.5$	Avg % Diff	-	-	72.3	43.1	49.3	44.9	50.6	33.9	42.2
		# Best	-	-	0	0	0	1	0	32	5
	$\lambda=1$	Avg % Diff	-	-	72.4	46.7	48.1	44.4	50.7	32.3	42.1
		# Best	-	-	0	3	0	0	1	40	2
	$\lambda=2$	Avg % Diff	-	-	76.1	52.5	56.3	52.5	58.2	41.2	51.2
		# Best	-	-	0	2	1	1	0	26	2
EODD	$\lambda=0.5$	Avg % Diff	31.2	27.6	27.4	23.0	23.0	22.9	23.0	22.8	-
		# Best	6	14	14	28	25	25	26	30	-
	$\lambda=1$	Avg % Diff	31.7	28.6	28.5	24.6	24.5	24.5	24.6	24.3	-
		# Best	11	14	14	27	27	27	27	29	-
	$\lambda=2$	Avg % Diff	31.0	28.3	28.2	24.2	24.0	24.1	24.0	23.8	-
		# Best	21	24	24	38	34	34	34	35	-
EJDD	$\lambda=0.5$	Avg % Diff	24.3	22.3	22.2	19.3	17.1	17.5	17.7	17.0	-
		# Best	12	13	13	21	32	33	28	33	-
	$\lambda=1$	Avg % Diff	27.4	26.6	26.4	24.5	22.9	23.2	23.7	22.8	-
		# Best	16	19	19	20	24	24	22	26	-
	$\lambda=2$	Avg % Diff	27.0	25.1	24.7	22.9	19.7	20.6	21.2	19.7	-
		# Best	26	33	34	41	58	47	50	59	-
EFMP	$\lambda=0.5$	Avg % Diff	29.4	26.5	26.0	22.4	18.8	18.8	22.2	18.4	-
		# Best	3	6	7	17	33	29	13	41	-
	$\lambda=1$	Avg % Diff	25.5	22.8	22.4	19.3	16.5	17.0	19.1	16.2	-
		# Best	18	23	23	35	52	46	37	63	-
	$\lambda=2$	Avg % Diff	31.9	29.4	29.1	26.1	22.5	22.5	25.2	21.8	-
		# Best	11	16	17	25	43	40	29	53	-
EAMP	$\lambda=0.5$	Avg % Diff	25.3	22.7	22.0	18.3	14.2	14.2	17.1	13.7	-
		# Best	10	14	14	29	44	46	28	61	-
	$\lambda=1$	Avg % Diff	22.1	19.9	19.4	17.1	14.7	14.8	16.2	14.5	-
		# Best	25	31	31	42	58	61	44	65	-
	$\lambda=2$	Avg % Diff	28.2	26.0	25.7	23.1	19.3	19.1	22.0	19.1	-
		# Best	14	19	23	42	64	62	45	71	-

Table D.50: Objective values compared to best objective value among combinations for T Variant

- Avg % Diff = average proportional difference of the objective values of the combinations with regard to the best known objective values among the combinations;
- # Best = number of times a combination has the best known objective value among the combinations;



			PC	BC	SCT	FD	BD	FBD	MPD	DYD	FTU
RFTU	$\lambda=0.5$	Avg % Diff	-	-	72.2	43.1	48.6	43.8	50.2	33.3	41.1
		# Best	-	-	0	1	1	1	0	45	5
	$\lambda=1$	Avg % Diff	-	-	72.4	46.7	47.9	43.9	50.5	31.3	41.4
		# Best	-	-	0	6	0	0	1	48	2
	$\lambda=2$	Avg % Diff	-	-	76.0	52.8	56.0	52.1	57.9	41.3	50.8
		# Best	-	-	0	1	1	1	0	26	2
EODD	$\lambda=0.5$	Avg % Diff	31.3	27.7	27.5	23.1	23.0	23.0	23.1	22.9	-
		# Best	6	15	15	29	25	25	26	30	-
	$\lambda=1$	Avg % Diff	31.4	28.3	28.2	24.4	24.2	24.1	24.3	24.0	-
		# Best	11	13	13	27	26	27	27	29	-
	$\lambda=2$	Avg % Diff	31.0	28.1	28.0	24.4	24.1	24.3	24.2	23.9	-
		# Best	24	27	27	41	37	38	38	40	-
EJDD	$\lambda=0.5$	Avg % Diff	24.4	22.5	22.4	19.9	17.8	17.9	18.5	17.7	-
		# Best	11	12	12	20	31	32	27	33	-
	$\lambda=1$	Avg % Diff	26.3	25.2	25.1	23.0	21.1	21.6	21.9	21.1	-
		# Best	21	24	24	25	32	32	28	35	-
	$\lambda=2$	Avg % Diff	27.2	25.5	25.1	23.4	19.9	20.7	21.3	19.9	-
		# Best	25	31	32	37	55	45	47	56	-
EFMP	$\lambda=0.5$	Avg % Diff	29.6	26.5	26.0	22.0	18.9	19.0	22.0	18.6	-
		# Best	3	5	6	18	32	30	17	40	-
	$\lambda=1$	Avg % Diff	25.8	23.8	23.4	20.3	18.1	18.5	20.1	17.8	-
		# Best	18	22	22	35	46	43	36	58	-
	$\lambda=2$	Avg % Diff	32.8	30.5	30.2	27.4	23.5	23.4	26.3	22.8	-
		# Best	9	15	16	22	40	37	26	47	-
EAMP	$\lambda=0.5$	Avg % Diff	25.5	22.7	22.1	18.0	14.6	14.6	17.0	14.1	-
		# Best	8	11	11	27	43	45	27	59	-
	$\lambda=1$	Avg % Diff	22.2	19.9	19.4	16.9	14.4	14.6	16.0	14.2	-
		# Best	23	29	29	41	59	61	45	69	-
	$\lambda=2$	Avg % Diff	29.0	26.8	26.5	23.9	19.6	19.5	22.8	19.2	-
		# Best	13	20	24	44	64	63	45	72	-

Table D.51: Objective values compared to best objective value among combinations for NT Variant