

Primary goal of this analysis is to put into perspective soviet mobilization efforts together with production of different equipment required by typical Soviet rifle division (RD). Why RD is important? Because RD is backbone of Soviet Army. At the beginning of operation Fall Blau (27.06.1942) RDs (together with Rifle Brigades) amounted 59% of all soldiers in Red Army (game data).

I have divided map into three zones. Each zone represent area which can be taken by German player at some tempo. I have chosen equally spaced intervals of eight turns for each zone, so Germans will, at beginning of turn 25 (first blizzard turn), have all three zones in their hands. Exact zone boundaries are presented at the map and in **table 1**.

Table 1 - Definition of various map areas

	X,Y	NOTE
Maximum German Advance Line in '41 (MGAL '41)	113,0 to 113,53 113,53 to 123,53 (Yerakhtur) 123,53 to 123,102 (Rostov) 123,102 to 120,102 120,102 to 120,104 120,104 to 114,104 114,104 to 114,111 114,111 to 78,111 78,111 to 78,119	Maximum possible German line of advance in '41. What German player can do in best circumstances (e.g. below average Soviet player, lot of skill and luck)
Zone 1	$x < 79$	Approximate line of advance after first 6-8 turns.
Zone 2	$79 < x < 100$	Approximate line of advance after first 12-16 turns.
Zone 3	$100 < x < \text{MGAL '41}$	Reached and occupied after 18-24 turns.
Leningrad Area	80,15 to 80,20 85,15 to 85,20	
Moscow Area	100,40 to 100,50 110,40 to 110,50	
Tula-Kharkov Area	100,55 to 100,90 110,55 to 110,90	
Stalino Area	110,90 to 110,100 120,90 to 120,100	

In **table 2** you can see production numbers for each zone.

Table 2 – Soviet production in different zones areas

	Historical total (turn 1) 22.06.41	Historical total (t. 54) 27.06.42	Zone 1	Zone 2	Zone 3	Zone 1+2+3
HI	236	217	7	35	65	107
RES	196	160	0	17	38	55
ArmP	370	339	7	51	169	227

VehP	140	137	0	6	45	51
Manp.	3742	2663	731	544	699	1974

Table 3 represent reduction in Soviet production after fall of each zone. Here are assumptions which I needed to make:

1.) I have no idea how much population will migrate from cities. **My best conservative guess is 30%.** So if I get this number far off reality please let me know and I will correct figures.

2.) Numbers in **table 3** represent case of no industry evacuation. Scenario 2 will correct this (see **table 6**).

3.) Evacuated manpower factories are not damaged and are operational immediately after evacuation. This will not be a case in real game but I don't think numbers will be significantly different. In my ongoing PBEM game I managed to take a lot of territory, but at start of blizzard Soviets don't have significant number of damaged factories (see post #1).

Table 3 – Total reduction in total Soviet production after fall of different zones

	Historical 22.06.41	Production after Z1 is occupied	Production after Z2 is occupied	Production after Z3 is occupied
HI*	236	229	194	129
RES*	196	196	179	141
ArmP*	370	363	312	143
VehP*	140	140	134	89
Manp.**	3742	3230.3	2849.5	2360.2

* Assuming no evacuation

**Assuming 30% automatic evacuation. In game, all evacuated factories will be heavily damaged and will require repair before they become operational. Assumption in this analysis is that there is no damage to evacuated factories.

To get more realistic numbers I have calculated average production in each zone during this hypothetical scenarios (**table 4**). For example, it is more realistic to assume that Zone 1 will produce materials and manpower until it is completely taken, then that it will produce at 100% capacity for eight turns and on turn 9 it's production to drop to zero.

Table 4 – Average reduction in total Soviet production after eliminating different zones

	Historical 22.06.41	Production after Z1 is occupied	Production after Z2 is occupied	Production after Z3 is occupied
HI*	232.5	211.5	166	138
RES*	196	187.5	160	141

ArmP*	366.5	337.5	237.5	163
VehP*	140	137	121.5	109
Manp.**	3486.15	3039.9	2682.5	2515.5

* Assuming no evacuation of industry

**Assuming 30% automatic evacuation. In game, all evacuated factories will be heavily damaged and will require repair before they become operational. Assumption in this analysis is that there is no damage to evacuated factories.

Table 5 provides final production results (mens, tons, etc.) instead of production points. Table 5 figures are based on non-evacuation of Soviet industry (worst case scenario). **Also, numbers in table 5, 6 and 7 are adjusted to take into account that most of soviet men and armament points (59%) will be used for making rifle divisions up to 70% TOE (which is historic average by game data). Rest of 41% will be used for something else (support units...).**

Table 5 – Scenario 1: Average Soviet production assuming no evacuation of industry and 30% evacuation of manpower

Produ- ction*	Turns 1-8 (1)	Turns 9-16 (2)	Turns 17-24 (3)	Total after first 24 turns (1+2+3)	Total after first 28 turns (1941)	Total after first 54 turns (start of Fall Blau)
HI	881.000	746.000	581.000	2.208.000	2.466.000	4.388.100
RES	1.534.000	1.390.000	1.204.000	4.128.000	4.692.000	7.794.000
ArmP	700.500	565.000	370.500	1.636.000	1.779.000	3.495.000
VehP	1.385	9.940	8.020	19.345	22.905	42.485
Manp.	1.254.040	1.128.950	993.010	3.376.000	3.848.040	6.137.434
Rifle div. per ArmP	11,5 p/t	9,3 p/t	6,1 p/t	214	233	458 (9,4 p/t in '42)
Rifle div. per men	12,4 p/t	11,2 p/t	9,8 p/t	266	303	483 (8,4 p/t in '42)

*NOTE:

1 HI = 500 supply points in '41 (650 in '42)

1 RES = 1000 resource points

1 ArmP =250 armament points in '41 (500 in '42)

1 Veh = 10 vehicles in '41 (5,5 in '42)

1 Manp. = 50 men in '41 (45 in '42)

1 Rifle division ('42 TOE) = 7.362 armament points and 12.706 men

p/t = per turn

Table 6 shows results of hypothetical scenario where Soviet player managed to relocate 50% of his industry.

Table 6 – Scenario 2: Average Soviet production assuming 50% evacuation of industry and 30% evacuation of manpower*

Produ- ction**	Turns 1-8	Turns 9-16	Turns 17-24	Total after first 24 turns	Total after first 28 turns	Total after first 54 turns (start
-------------------	-----------	------------	-------------	-------------------------------	-------------------------------	--------------------------------------

	(1)	(2)	(3)	(1+2+3)	(1941)	of Fall Blau)
HI	912.500	845.000	762.500	2.520.000	2.885.000	5.604.250
RES	1.551.000	1.479.000	1.386.000	4.416.000	5.090.000	8.797.000
ArmP	720.250	652.500	555.250	1.928.000	2.184.500	5.262.500
VehP	1.393	10.570	9.610	21.573	26.153	51.343
Manp.	1.254.040	1.128.950	993.010	3.376.000	3.848.040	6.137.434
Rifle div. per ArmP	11,8 p/t	10,6 p/t	9,1 p/t	253	286	690 (16,8 p/t in '42)
Rifle div. per men	12,4 p/t	11,2 p/t	9,8 p/t	266	303	483 (8,4 p/t in '42)

*NOTE: In game, all evacuated factories will be heavily damaged and will require repair before they become operational. Assumption in this analysis is that there is no damage to evacuated factories.

**

1 HI = 500 supply points in '41 (650 in '42)

1 RES = 1000 resource points

1 ArmP = 250 armament points in '41 (500 in '42)

1 Veh = 10 vehicles in '41 (5,5 in '42)

1 Manp. = 50 men in '41 (45 in '42)

1 Rifle division ('42 TOE) = 7.362 armament points and 12.706 men

p/t = per turn