```c
#include <mpi.h>
#include <stdio.h>

#define MAXSIZE 100000000


int main(int argc, char** argv)
{

    double* localdata = NULL;

    int i, x, low, high;
    int myid, numprocs;
    int dest, source;
    double myresult, result, result_temp;
    double starttime, endtime;
    MPI_Status status;
    MPI_Init(&argc, &argv);
    MPI_Comm_size(MPI_COMM_WORLD, &numprocs);
    MPI_Comm_rank(MPI_COMM_WORLD, &myid);

    x = MAXSIZE/numprocs;
    // alloco solo quello che mi serve, non TUTTO MAXSIZE!
    localdata = new double[x];

    result = 0;
    myresult = 0;

    // Init...(each process, even master)
    // Oppure alloco data solo su MASTER e poi spezzetto sui procs...
    for (i=0; i<x;i++)
        localdata[i] = myid;

    MPI_Barrier(MPI_COMM_WORLD);
    starttime = MPI_Wtime();


    // Compute my result (even Process 0 will do it - MS democratico)
    for (i=0; i<x; i++)
        myresult = myresult + localdata[i];

     if (myid == 0){
        result = myresult;
        for (source=1; source<numprocs; source++){
            MPI_Recv(&myresult, 1, MPI_DOUBLE, MPI_ANY_SOURCE, 0, MPI_COMM_WORLD, &status);
        result = result + myresult;
        }
     }
        else
            MPI_Send(&myresult, 1, MPI_DOUBLE, 0, 0, MPI_COMM_WORLD);

    MPI_Barrier(MPI_COMM_WORLD);
    endtime = MPI_Wtime();

    if (myid == 0){
        printf("Sum is %e.\n", result);
        printf("Elapsed time: %f\n", 1000*(endtime - starttime));
    }
    delete[] localdata;
    MPI_Finalize();
    exit(0);
}

```