

## Some Spatial Aspects of Currency Areas

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1. All questions concerning the possibility and size of currency areas contain a spatial component. This is true even though money represents one of the most mobile of resources. An indication that distance is relevant in monetary affairs is for instance the observation of *Lösch* (1944) that interest rates tends to rise with distance from financial centers. While it would be naive to trace this to a transportation cost for money, this fact shows clearly that something like communications cost over distance is involved here.

Such communications costs are rather elusive. To show that space matters and that distance imposes some real limitation on the potential size of currency areas, we will look into the transportation cost proper of funds. The analysis of these will be carried out in the spirit of *pars pro toto*.

To get an idea of the physical magnitude of the job of moving banknotes from places of issue to the locations of users, we cite the following statistics.

In the Federal Republic of Germany 1000 banknotes have an average weight of 1 Kg. Total circulation is 940 tons. The amount of coins issued is approximately DM 100.— per capita, representing an average weight of 0.5 Kg per capita.

2. Now the transportation problem for money arises because there is a regional imbalance between cash payments received and cash payments made. As a general rule, big cities are deficit areas, since more cash is paid out in wages and salaries than is received by local business. Recreation areas are net recipients and hence surplus areas. Thus broadly speaking, cash must flow back from rural areas to city centers. This movement is seasonal and the pattern may be reversed at times: Thus during the pre-holidays shopping season, cities are surplus areas instead.

Consider now the same problem for a foreign currency say French Francs circulating in West Germany. With respect to Francs, Germany

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