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The Distribution of Post Offices in Italy and the United States

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1. Introduction

Throughout the industrialized world, the post is considered a basic and fundamental service, whether it is provided by the national government or simply guaranteed by it. The universal service obligation (USO) for postal services always includes a mandate to render effective and regular service to all areas including rural ones. In Italy and the United States, the distribution of post offices is very different than it would be if post offices were distributed on the basis of market forces. This is probably true for most if not all industrialized countries. Rural areas receive a higher quality of retail service than do urban areas in terms of their disproportionate number of post offices relative to their population. This in turn makes the provision of counter service to rural population much more expensive than urban populations. Because of increasing direct and indirect competition, universal service providers are under great pressure to keep costs down. As a result, post offices in rural areas will become an increasing burden and are likely to be a more visible political issue than in the past.

Table 1 shows that almost all postal administrations are reducing the number of their post offices. It also shows that the United States has relatively few offices as it ranks third in terms of the average number of persons served by each. The United States has over 700 pieces of mail per capita, and so it spreads the cost of counters over more pieces than other postal administrations. Counter services comprised five percent (or \$3.5 billion) of total USPS cost in 2004. On the other hand, the burden of counter services in many countries is shared with financial services (and/or governmental services) or has been extensively outsourced, which lowers the burden on mail. It would seem that the cost of post offices—in terms of the percentage of total cost or the cost per piece of mail—would be greater than in the United States, at least, for postal administrations that do not share the cost of counters or have not franchised extensively.

Table 1
Comparison of Selected Countries

Country	People per Post Office (Rank)		Number of Post Offices		
	1988	2003	1988	2003	% Change
Australia	3,650 (9)	5,120 (8)	4,489	3,853	-14%
Austria	2,856 (13)	4,043 (12)	2,676	2,007	-25%
Belgium	5,392 (5)	7,931 (2)	1,838	1,301	-29%
Denmark	4,032 (7)	5,264 (6)	1,270	1,019	-20%
Finland	1,690 (16)	3,868 (13)	2,926	1,346	-54%
France	3,313 (12)	3,560 (15)	16,949	16,992	0%
Germany	3,527 (10)	6,102 (5)	17,410	13,514	-22%
Greece	7,768 (1)	4,949 (9)	1,296	2,218	71%
Ireland	1,676 (17)	2,386 (19)	2,103	1,658	-21%
Italy	3,939 (8)	4,183 (11)	14,373	13,728	-4%
Japan	5,135 (6)	5,165 (7)	23,871	24,715	4%
Luxembourg	3,504 (11)	4,196 (10)	106	108	2%
Netherlands	5,625 (4)	6,267 (4)	2,624	2,577	-2%
Norway	1,540 (18)	3,067 (16)	2,728	1,478	-46%
Portugal	1,371 (19)	2,844 (17)	7,259	3,537	-51%
Spain	6,122 (3)	12,283 (1)	6,368	3,343	-48%
Switzerland	1,783 (15)	2,634 (18)	3,763	2,722	-28%
United Kingdom	2,683 (14)	3,733 (14)	21,030	15,868	-25%
United States	6,258 (2)	7,825 (3)	40,117	37,579	-6%

While several postal administrations have converted many post offices (especially in rural areas) to franchises, this is politically very difficult or even impossible in many countries. This is certainly the case in Italy and the United States. The savings can be large, however, especially for postal administrations that do not provide financial services. For example, in 2004 a small rural office in the United States cost about \$63,000 to operate (including salaries, rent and utilities.) The average revenue for such an office was about \$31,000. A contract or franchise office cost about \$17,000 annually, for a saving of about two thirds. Frequently, there are strong objections from the community when an office is converted to a contract office. These conversions are opposed almost as much as an outright closing in the U.S.

It is generally conceded that many small rural offices cannot be justified on economic grounds, because they have relatively few transactions and they have a considerable fixed

cost.¹ Moreover, postal administrations and commercial mailers who provide most postal revenue argue that these offices are not necessary to provide adequate postal services to the rural communities they serve. However, defenders of these offices argue that they are vital to the well being of the communities they serve and they are included in the USO of the post.² It is interesting to note that the authors have found no quantitative studies in either the United States or Italy that analyze the value of these offices to the communities that they serve.

2. Retail Services Provided by Rural Carrier

In the United States and in other countries, rural carriers provide retail services to recipients along their route. U.S. Postal Service patrons can meet the carrier or leave money or a check in their rural roadside mail box with a note containing instructions and obtain virtually every service offered to consumers and small businesses. In communities where post offices have been closed, there are few if any businesses catering to the residents. When it is inconvenient to use a rural carrier, a customer can visit a post office in a nearby community when doing normal shopping. Whenever the Postal Service closes a post office, it claims that rural carriers can provide whatever service is supplied by the closed facility. In most cases, however, customers of closed offices feel that rural carrier service is an inadequate substitute. Poste Italiane carriers do not offer retail services.

3. The Development of Post Offices in Italy

In 1859, two years before national unification, there were 1,632 post offices in North and Central Italy, excluding Venice and Rome. Table 2 presents the data from 1895 to 2002. Regular delivery service was furnished by horse riders (*cavallari*) during the middle age and the Renaissance. When Italy was unified in 1861, Rowland Hill's reforms (uniform tariff and sender pays) were adopted in Italy. Delivery was furnished by postmen in urban areas and was usually contracted out in rural areas.

¹ Data concerning post office closings that have come before the U.S. Postal Rate Commission indicate that many small rural offices have fewer than 20 counter transactions daily.

² For a good description of the perceived benefits to small rural communities from their post office see Richard J. Margolis, *At the Crossroads: an Inquiry into Rural Post Offices and the Communities they Serve*, U.S. Postal Rate Commission, 1980.

Table 2
Development of the Italian Postal Network

Year	Population	Post Offices	People per Post Office
1895	31,948	5,965	5,356
1915	37,067	10,442	3,550
1920	36,431	10,812	3,369
1925	39,941	10,676	3,741
1926	40,268	10,992	3,663
1932	42,192	11,278	3,741
1935	43,194	11,352	3,805
1942	45,752	11,735	3,899
1957	49,311	11,735	4,202
1989	56,694	14,400	3,937
2000	57,844	13,950	4,147
2002	57,321	13,787	4,158

There are two main reasons for the gradual increase in the number of post offices in Italy despite the existence of regular delivery service in both rural and urban areas. In the first years after unification, Italy was an artificial aggregation of provinces with huge differences in education, culture, economic development, language, customs, politics, and infrastructure. A national postal network providing ubiquitous service was seen as an effective way to pull the nation together.³ In addition, the newly established postal network enjoyed significant economies of scope because of communication (telegraph and telephone) and financial (savings and money transfer) services. Postal savings was a particularly important way to develop trust in the post. It helped that the savings went into a national fund entirely devoted to financing local infrastructure. Historically, the post has been the most important provider of financial services in poor areas of the country without many bank branches.⁴

³ This was also the case in the U.S. in the early years of independence.

⁴ In areas that lack bank branches, the per capita sale of postal bonds is nearly three times the average.

The number of inhabitants per post office gradually increased until the early Sixties⁵. In the Fifties Poste Italiane was profitable and it financed the cost of the retail network. Financial services only broke even at that time.⁶ However, starting in the Sixties, politicians began to use the postal service for patronage. They engaged in corrupt contracting practices and established new post office branches for political benefit. The inefficiencies were uniformly spread over the postal network, so the cost for inefficient rural post offices was no higher than the cost for inefficient urban offices. Today, nearly 20 percent of post offices in Italy are unprofitable, but the cumulated loss does not exceed 143 million Euro in 2004.⁷ To eliminate this deficit, the first choice of politicians would be additional activities to utilize spare capacity, and thus avoid the political cost of closing facilities. Recently there has been a small reduction in the number of post office and there have been efforts to reduce the number of days a week unprofitable facilities are open.⁸

In Italy, as in other OECD countries, contracting out counter services (letter and parcel clearance, money collection) may not be practical. There may be no savings if, as in Italy, the potential franchisees (e.g. tobacconists) have a politically strong association and require compensation that equals postal cost. In addition, contracting has the disadvantage of losing the (highly valuable) relationship with the customer.

The actual average value of 4.2 post offices per thousand inhabitants in Italy cannot be considered either as low (with respect to the United States) or high (with respect to France), because this figure is the weighted result of average population density,

⁵ Note the decrease in population between 1915 and 1920 due to deaths in World War I.

⁶ Traditionally, the main device for steering economic results of postal financial services to the desired target has been the implicit interest rate of the State to the Post Office on postal savings. Today, this variable is still important but not decisive. However, the Italian bank association, ABI, in a recent antitrust case demonstrated that the monopoly granted to Poste Italiane provides improper financing and therefore distorts competition. One may observe that the implicit interest rate should be evaluated using an opportunity cost approach: Would the banking system charge lower rates for the same task? Looking at prices charged for similar activities, the answer is clearly negative.

⁷ Based on an estimate from the NERA study, "Costing and Financing of Universal Service in the Postal Sector in the European Union," 1998.

⁸ Poste Italiane's employees generally work six days a week, including Saturday morning openings, which is considered an advantage in competing with banks.

efficiency in allocating post offices given the bundle of services provided, and geographic factors (such as the way the population is spread over a commune.)⁹

There are 8,100 communes in Italy. Three thousand have less than 2,000 inhabitants and one thousand have less than 1,000 inhabitants. Communes without a post office are in urban areas near larger cities. Thus, it would be expected that there are a disproportionate number of rural post offices as in the United States and probably throughout the industrialized world.

4. Growth and Decline of Rural Post Offices in the United States

In 1890, only a quarter of the U.S population received free mail delivery, which was only available in cities. Most people lived on farms or in small farming towns and had to travel, often miles, to a post office to pick up their mail. Figure 1 shows the increase in the U.S. population and the increase and then decline of the number of post offices in the U.S from 1790 through 2001.¹⁰ There is a very high correlation between population and post offices until 1901 when the number of post offices peaked. The advent of Rural Free Delivery caused a sudden reversal. RFD, as it was called, began as an experiment in 1896 and continued to cover more and more of the country. By 1915, virtually the entire nation was served.¹¹ RFD eliminated the need for many rural offices. The Post Office Department announced a policy to abolish all small rural offices that duplicated the new delivery service.¹² Only those offices from which the newly established routes originated

⁹ Let's suppose two communes, a and b, with the identical population and territory. In a, the inhabitants are located in two villages far away from one other, while in b there is only one urban centre. Fulfilling the demand for postal services requires two post offices in a, but only one in b.

¹⁰ Figures 1 and 2 include only classified post offices. They exclude other retail facilities such as stations, branches, and contract facilities.

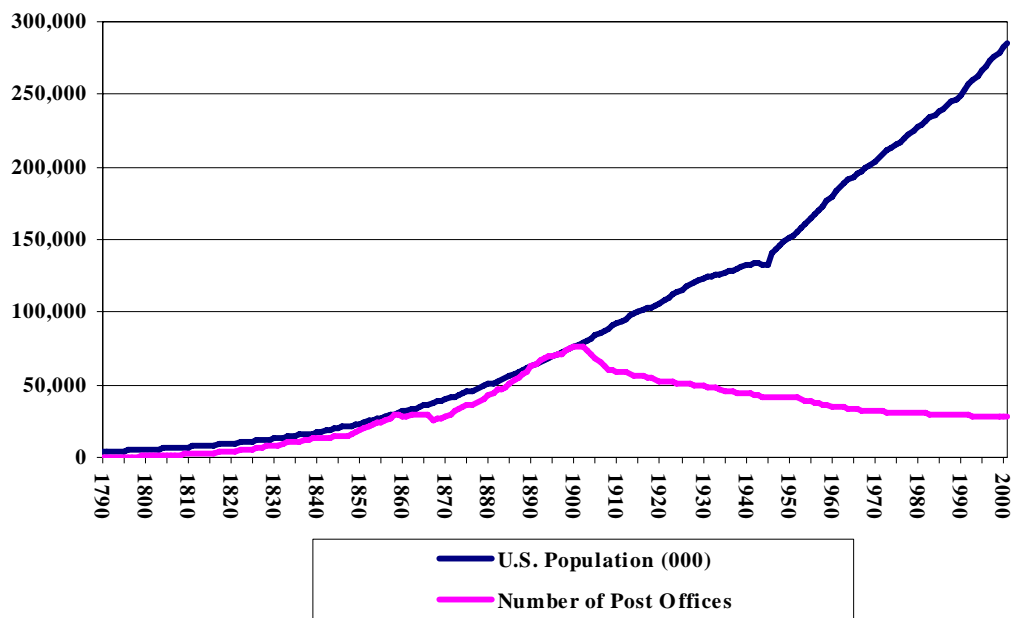
¹¹ There were 43,718 rural routes by 1915.

¹² Wayne E. Fuller, *RFD: The Changing Face of Rural America* (Bloomington: Indiana University Press, 1964), p. 85.

would remain open.¹³ With the advent of RFD, there was no need for farmers and other rural residents to travel to a post office in town to pick up their mail or to post letters.¹⁴

The legacy of a largely rural population means that there remain a disproportionate number of rural communities relative to the number of urban communities. Generally, each community has a post office (as in Italy) which results in there being a disproportionate number of post offices in rural areas.

Figure 1
Comparison of U.S. Population with the Number of Post Offices



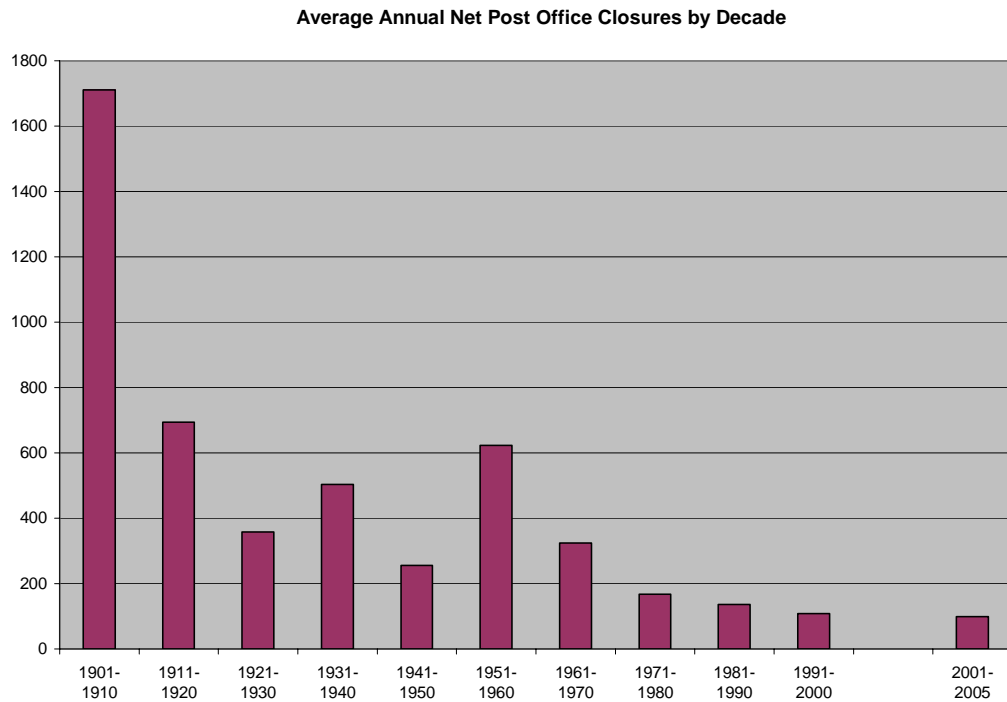
The Post Service has continued to close post offices at a slowing rate to the present day (see Figure 2). In the last five years, the Postal Service has closed only 494 post offices (1.8 percent). The slowing of the rate of closings can be largely attributed to Congressional pressure, which led to a temporary four year moratorium on closings in

¹³ The Post Office Department was only partly successful in carrying out this policy.

¹⁴ Until 1952, the Post Office Department provided what was known as Postal Savings accounts that paid a nominal rate of interest. These accounts were never important enough to justify maintaining a post office.

1998.¹⁵ The long standing policy of the Postal Service is only to close an office when the postmaster leaves, retires, or dies.¹⁶

Figure 2



5. The Distribution of Banks and Post Offices in Italy

Unlike the U.S comparison of post offices with pharmacies (see Section 7); the Italian comparison is with post offices and bank outlets because the location of pharmacies is strictly regulated in Italy. Services offered by bank branches are arguably more important to most people in Italy than mail-related service provided by post offices. Post offices in recent years, however, have become more useful to many Italians as a result of significant changes in Poste Italiane's financial services.¹⁷

¹⁵ The moratorium extended from March 16, 1998 to April 5, 2002.

¹⁶ It is not known how long this policy has been in effect, but it is mentioned in an annex of the Kappel Commission's report: Arthur D. Little, Inc., "Postal Problems and Their Causes," contractor's report in *Towards Postal Excellence* by the President's Commission on Postal Organization (Washington, D.C.: Government Printing Office, 1968), Annex 3, 2-32.

¹⁷ Italy is an example of an established network of post offices with excess capacity that was revitalized to compete for commodity financial services (e.g. current account, checks, savings, bond sales etc.)

The Post Office network was originally set up on a political rather than business basis with each commune (the first level of local government in Italy) having its own local retail post office. Often small remote villages belonging to a commune were also granted an office.¹⁸ Banks, on the other hand, are located on a purely commercial basis. This difference is shown by the correlation of the number of post offices and bank outlets with population, family income, number of firms, local branches and size of each commune.¹⁹

Table 3
Correlation Coefficients of Post Offices and Bank Outlet with Population, Family Disposable Income, Local Firm Branches and Square km in Italy

	Population	Family disposable income	Local firm branches	Square km
Post offices (PO)	0.711	0.719	0.747	0.476
Bank outlets(BO)	0.901	0.97	0.969	0.22

Table 3 shows that the number of bank outlets is more highly correlated with post offices with respect to population, income, and number of local firms. Square km shows a lower correlation with banks than with PO. Not surprisingly, bank branches, much more than post offices, go where there are people, money, and businesses.

In Figure 3, communes are split into three groups: 1) communes with at least two post offices and two bank outlets, 2) communes with only one post office and one bank outlet,

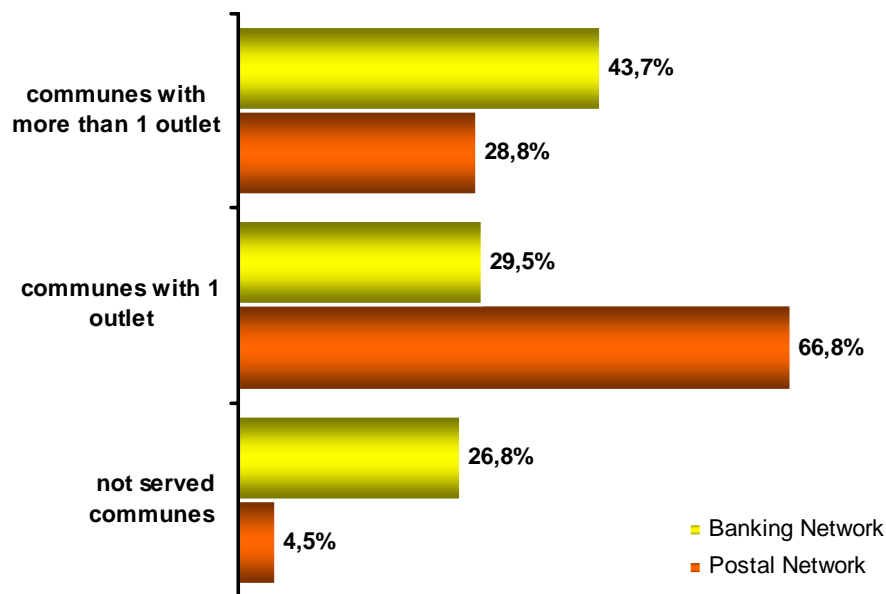
The Post's financial services revitalization program included improving service and employee training while offering lower prices and Saturday hours. The number of customers increased from 600,000 in 1998 to 4.5 million in 2005. Poste Italiane does not explicitly compete with banks in loans, because the legislation forbid non-bank organizations (such as PI) to lend money. However, loan services of other banks are supplied in some large retail postal outlet with PI acting as agent of bank firms.

¹⁸ The number of Communes is greater than 8,100, with very large differences (due to local history) in both territory extension and population (from less than 500 people in some village in the North up to Rome, accounting more than 3.1 million).

¹⁹ Post office data is from the 1999 Poste Italiane Post Office data base. The population data source is ISTAT (Italian Bureau of Census) and bank outlets are from the 2001 Bank of Italy data base. The number of observations is 8,012. There are 14,084 Post Offices (PO) and 27,117 Bank Outlets (BO).

and 3) communes not served by bank or post office. The distribution of post offices in the three groups differs from that of bank outlets. While almost a half of banks are located in communes with several postal and bank facilities, less than a third of post offices belong to Group 1. The vast majority of post offices (68.percent) are located in small communes served by only one PO and BO. The most striking difference between PO and BO distribution relies on the Group 3. Only 4.5 percent of communes are without PO, while 26.8 percent are not served by a BO.

Figure 3
The Banking and Post Office Network in Italian Communes



Sorting the same data further (Communes with at least one PO but without a BO) allows rough estimate of the uneconomic allocation of PO. Twenty-one percent of communes fall into this group.

Another source of information comes from the Poste Italiane's post office data set, for 2002. Table 4 shows that the number of households per postal facility is consistently lower than the number of people per bank outlet through semi-decile nine. Moreover, the average number of households is monotonically increasing in each semi-decile, while the

number of bank outlets is nearly constant in all but the first and last semi-deciles (5-percent groupings).²⁰ It will be seen in the next section that this is remarkably similar to the U.S data on post offices and pharmacies. The fact that many postal facilities serve far more people than bank outlets in the semi-deciles with greater population densities reflects the fact that people visit post offices much less frequently than they visit banks. The highest post office density in Italy is in the mountain areas of the North and South. Bank branches, on the other hand, are disproportionately located in the North because it is significantly richer and more densely populated.

Table 4
Average Number of Households in 2002 Served by Poste Italiane Retail Facilities and Bank Branches Ranked by Population Density

Semi-decile	Households per Post Office	Households per Bank Branch
1	103	1291
2	176	819
3	235	849
4	286	742
5	335	728
6	389	655
7	449	604
8	515	643
9	589	648
10	680	903
11	795	586
12	938	580
13	1103	573
14	1314	597
15	1596	574
16	1938	612
17	2406	591
18	3098	606
19	4371	642
20	10453	1057

²⁰ The first semi-decile has a disproportionate number of household per BO because of the absence of bank branches (the average is weighted) and the last semi-decile is caused by large city facilities, where economies of scale allow the increase in the size of the area served.

6. Comparison of the Distribution of Postal Retail Facilities and Pharmacies in the United States

Arguably, pharmacies are at least as important to the average citizen as post offices. Comparing the geographic distribution of a commercial service, like pharmacies, with the distribution of post offices illustrates what the distribution of post offices might look like if it were driven by market forces. The rows in Table 5 present statistics on five-digit ZIP

Table 5
Number of Persons Served
by USPS Retail Facilities and Pharmacies
in Census ZIP Code Tabulation Areas (ZCTAs)
Ranked by Population Density^a

Semi-decile	Average No. of People per USPS Retail Facility ^b	Average No. of People per Pharmacy	Average Land Area per ZCTA (sq miles)
1	454	6,738	369
2	976	4,825	218
3	1,215	5,647	139
4	1,404	5,760	107
5	1,697	5,801	96
6	2,143	5,250	94
7	2,391	5,049	82
8	3,049	4,751	86
9	3,510	5,105	81
10	4,007	4,598	73
11	5,119	4,702	72
12	6,143	4,657	66
13	7,615	4,916	56
14	9,321	5,090	47
15	10,128	4,944	32
16	11,921	4,900	21
17	14,501	4,778	13
18	16,100	4,705	9
19	18,842	5,138	6
20	24,030	5,347	3

Source: U.S. Census Bureau 2000 ZCTA data, National Council for Prescription Drug Programs, Inc. (NCPDP) Pharmacy Database (2002), and U.S. Postal Service facilities data (2002).

^a Only ZCTAs in the continental United States are included.

code tabulation areas grouped into semi-deciles based on population densities.²¹ Group Number 1 contains the least densely populated ZIP code areas in the country; Group Number 20 contains the most densely populated. There are 1,579 five-digit ZIP code areas in each semi-decile.²² The average number of people per postal retail facility appears in column 2.²³ It can be seen that this ranges from a low of 455 per retail facility in the least densely populated areas to a high of 24,000 in the most densely populated areas, a remarkably wide span. The average number of people per pharmacy is shown in column 3 and ranges from a low of 4,701 to a high of 6,738; a much tighter span.²⁴ The average land area for each five-digit ZIP code area is shown in column 4. The average land area decreases consistently as the population density of the five-digit ZIP code areas increase.

The discrepancy in the number of people per postal facility versus the number per pharmacy in the first nine semi-deciles is a legacy of the period before RFD when farmers needed to travel to the post office to get their mail. The comparative uniformity of the number of people per pharmacy results from the fact that it takes a certain number of people to support a pharmacy. Competition seems to keep the number relatively constant. The fact that many postal facilities serve far more people than pharmacies in the semi-deciles with greater population densities reflects that most people visit post offices much less frequently than they visit pharmacies.

7. Concluding Remarks

Both Italy and the US have a very disproportionate percentage of their post offices located in rural areas (see Table 6). It is likely that the distribution of post offices in most postal administrations is disproportionately rural. Bank branches in Italy and pharmacies in the United States have a market distribution that is very different.

²¹ They correspond quite closely with five-digit zip code areas.

²² Semi-deciles 1, 7, and 14 contain 1,580.

²³ A retail facility can be a post office or a branch or station of a large post office.

²⁴ These are pharmacies that serve the general public.

Table 6
Comparison of the Distribution of Population, Post Offices and Pharmacies/Bank Branches in the U.S. and Italy in Percentage

Country	Population		Post Offices		Pharmacies/Bank Branches	
	Urban	Rural	Urban	Rural	Urban	Rural
U.S	79	21	49	51	88	12
Italy	92	8	68	32	90	10

When postal administrations enjoyed strong monopolies, this kind of non-economic distribution was quite acceptable. The monopoly forced everyone to pay for various types on non-economic behavior. However, postal administrations face increasing indirect competition from the internet and (the prospect of) direct competition from liberalization. It is likely that bulk mail and not single piece mail will be subject to direct competition as in Sweden. If so, it would be difficult to charge the cost of the retail network to competitive bulk mail since most mail related retail activities are for single piece mail. New entrants will not be saddled with a network of post offices. In order to set competitive prices, incumbents will have to allocate costs based on causation and bulk mail will pay only for the small portion of the retail network cost that it imposes.

Thus, under a competitive scenario, the network of post offices would largely be paid for by single piece revenue. The cost of counter services in the U.S. in 2004 was over 12 percent of total single piece revenue and the cost of small rural offices in the U.S. was three percent of single piece revenue.²⁵ This would be a heavy burden to place on single piece mailers. In other countries with less volume, the burden would be more substantial. Of course, the burden may be ameliorated if counters are shared with financial services or are heavily outsourced. Notwithstanding, there will be considerable pressure to move toward a more commercial distribution of retail services, outsourcing, or both under a liberalized scenario.

²⁵ Single piece First Class mail volume was 45 billion pieces in 2004 (out of a total of 205 billion) and its revenue was \$20.5 billion (out of a total of \$69 Billion.)