

Chapter #

Questioning the Monopoly-Supported Postal USO in Developing Countries

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1. INTRODUCTION

The monopoly-supported universal service obligation (USO) is usually defended on the grounds that the monopoly allows for cross-subsidy in letter services that in turn allows universal access to a service of great importance to all. This paper argues that letter delivery (as opposed to other services that may be provided by post offices) is not in universal demand in poor countries, that the size of the market in developing countries is such that USOs could not be met under the monopoly model, and that the monopoly carries heavy costs for sector development and consumer welfare. It proposes in the place of the postal USO a competitive approach involving universal access to a range of services that poor people have a need to access.

2. THE THEORY OF THE MONOPOLY-SUPPORTED USO

The European Union (EU) defines universal service to post in the following terms:

“Member States shall ensure.. the permanent provision of a postal service of a specified quality at all points in their territory at affordable prices for all users... the universal service provider(s) guarantee(s) every working

day... one delivery to the home or premises of every legal or natural person...[for] postal items up to two kilograms [and] postal packages up to 10 kilograms...”

Traditionally this USO has been linked with monopoly provision of services. The theory of the monopoly-provided USO can be summed up as follows. Mail delivery to the home is an important public service to which all should have access. For many low-volume or difficult to service users, however, the market price of mail services would be prohibitively high. In order to serve those customers while allowing for a financially sustainable postal network, a monopoly operator charges a single stamp rate for nationwide delivery, with “profits” made from the delivery of mail to high-volume areas and users (where the price of the stamp is higher than the cost of delivery) used to support “loss-making” delivery operations for low-volume areas and users.

Many developing countries have adopted the monopoly USO model for their own postal systems. They do not tend to have USOs as stringent as the EU’s, while in many cases, the obligation is rather imprecise or undefined, it rarely involves home delivery, for example.¹ Nonetheless the general model holds that a provider will ensure one-price letter delivery across its national territory, funding loss-making routes with the revenues that it is guaranteed from a monopoly, over delivery on profitable routes.

The model has proven itself practicable (if not necessarily efficient) in many wealthy countries. However, its application in developing countries is likely to be inefficient, impractical, and inequitable. This paper argues that a narrow, mail-based USO should be abandoned and the postal sector opened to competition. In place of a mail-only USO, governments in developing countries might decide to extend access to a bundled range of services widely in demand by urban, rural, poor, and rich alike. These services might be delivered through post office franchises.

3. DO WE WANT A USO FOR LETTER DELIVERY IN DEVELOPING COUNTRIES?

Is there evidence that everyone in developing countries needs (or would use) letter delivery to a nearby post office every business day or every week? It is perhaps worth asking this question in the context of severe resource constraints that mean the goals of universal primary education or universal access to basic health care are far from being reached. To begin to answer that question it is worth looking at demand for letter services in poor

¹ Even within the EU there remain questions as to the nature of the USO—does it demand a uniform tariff, for example?

countries. Overall demand for postal services is very closely correlated with the size of an economy. Smaller (poorer) economies see lower mail volumes (letters per capita). Countries with a GDP per capita (PPP) of below \$1,000 see mail volumes of below 1 per person per year—compared with closer to 100 per person in countries with a GDP per capita of above \$5,000 (Table 1).

Constraints on demand due to inadequate or absent service delivery will be one factor behind low levels of use, but by far the dominant cause is demand related to income—as suggested by the results of both postal reform and extending access. Under reform, service quality improves, and this tends to increase use of the postal sector. But the usage increase, while impressive, is in the region of perhaps 100 percent, rather than the 10,000 percent differences between low income and high income country usage rates. For example, successful postal reform in Tanzania saw mail volumes increase from 0.87 to 1.26 letters per capita per year during 1994-98. This post-reform figure remains only approximately 0.17 percent of US per capita mail volumes. Regarding extended access, there does not seem to be a relationship between the percentage of the population covered by postal service and letter volumes per capita in developing countries—extending network access, like improving network quality, does not apparently uncover significant unmet demand for postal services (Kenny and Qiang, 2004). In Tanzania, for example, only an average of about 0.4 percent of the population within the catchment area of a post office visit that office each week (PWC, 2004).² Furthermore, it appears that demand for postal services is dropping in developing countries including Tanzania as alternate means of communication—especially mobile phones—spread (Souter et. al. 2005).

Table 1: Postal Structure and Development

| Indicator | Average for GDP Per Capita (PPP) Band | | |
|---------------------|---------------------------------------|-----------------|----------|
| | <\$1,000 | \$1,000-\$5,000 | >\$5,000 |
| Letters/Capita | 0.9 | 4.6 | 98.4 |
| Total letter volume | 10m | 634m | 2,468m |
| KM2 per post office | 4,702 | 1,738 | 458 |

Source: Calculated from UPU and World Bank data, 2001

The average consumer in poorer countries sends perhaps one letter per year—and we know that the great majority will neither send nor receive a single letter.³ In particular, there is little demand from businesses (which account for as much as 80 percent of letters sent [Lee, 2004]) to deliver mail to the poorest in developing countries. This is because most do not have services that require billing (fixed telephony or electricity, as it might be),

² In Malawi, the figure is closer to 0.2 percent.

³ At least not through the network captured by Universal Postal Union (UPU) statistics.

and they are hardly an attractive target for companies in terms of marketing purposes. If the majority of the population never receives a letter in the poorest countries, and might not even after significant postal reform, the concept of universal service is somewhat nonsensical.⁴

Overall, there does not appear to be significant demand for universal postal services even if they were to be a financially viable option. If universality was achieved using some sort of subsidy mechanism, given the direction of most mail towards business and the wealthy, this would constitute a regressive intervention.

4. COULD A LETTER USO BE SUPPORTED IN DEVELOPING COUNTRIES UNDER THE MONOPOLY MODEL?

Even if developing countries desire a monopoly-supported USO model, it appears unlikely to be sustainable in many countries. This section argues that developing countries, with small postal markets, cannot benefit from significant scale economies (which in turn drives up the per-unit cost of letter delivery) and face far more complicated environments in which to deliver mail. These factors combined mean that even a limited USO model supported by monopoly rights would be unsustainable in many low-income countries.

By and large (and with obvious exceptions such as China and India), absolute mail volumes in poorer countries are very small. Total mail volumes in countries under \$1,000 GDP per capita average 10 million pieces, compared to 2.5 billion pieces in countries with a GDP per capita of over \$5,000 (Table 1).

This is a problem because it is clear that there are fixed-costs associated with mail systems that make low-volume environments high-cost ones as well. Scale economies, due to factors such as automated processing and (more significantly) scale effects in delivery, will be one factor behind a relationship between total mail volumes and letters delivered per employee. Countries that see delivery of fewer than one million letters a year deliver on average below 4,000 letters per employee per year (such countries include Cape Verde, with just over 939,000 letters delivered by a staff of 3,947). This compares to over 60,000 per employee in countries where over 100 million letters are delivered a year (South Africa delivers nearly 2 billion letters using a staff of 74,000, for example). This is a 15-fold productivity difference (Table 2).

⁴ Regarding home delivery, many (most) poor and rural people do not live in households with a recognized address, so they could not receive mail if it were being delivered.

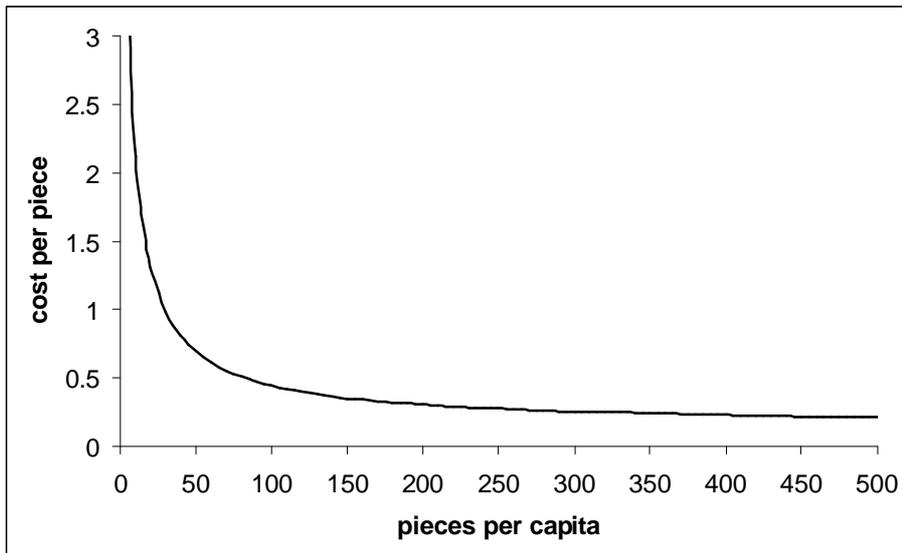
Table 2: Cross-country Evidence of Scale Economies in Posts

| | Average for Total Letters Delivered Band | | |
|------------------|--|-------------------------|--------------|
| | <1,000,000 | 1,000,000 – 100,000,000 | >100,000,000 |
| Letters/Employee | 3,587 | 20,693 | 59,739 |

Source: Calculated from UPU and World Bank data, 2001

We can see the impact of scale economies by looking at estimates based on the United States Postal Service (USPS) on the costs of a US-style service in lower volume environments with lower input costs. The USPS will differ dramatically from post offices in low-income countries in terms of automation, route topography, mix of mail, efficiency, and the nature of its customer base—and so the model is only an approximation (made less accurate by a weak proxy for input costs—that of GDP per capita). Thus, while Cohen et. al. show that their model inspired by USPS cost and demand conditions functions reasonably well in estimating features of rich country postal operations, it is very likely that the adjusted model will become increasingly inaccurate as a guide when looking at low-income postal markets (Cohen et. al. 2003).⁵

Figure 1: Estimated Relationship between Costs per Letter and Volumes



(Based on Cohen et al. (2003))

⁵ It is also worth noting that UPU data suggests a fairly weak relationship between GDP per capita and total costs per letter (Kenny and Qiang, 2003). This is somewhat surprising given evidence that poor countries in general see low volumes and so will benefit less from economies of scale, it may reflect lower quality and extent of service..

With those caveats, Figure 1 shows what the Cohen study and World Bank data suggests the cost of delivering a letter under United States' USO standards would be in countries with lower mail volumes. As the number of pieces per capita drop below 100 per year, costs rise dramatically above 50 cents per piece.⁶ This may help to explain why the United States only mandated universal home delivery in 1958, when letter volumes were above 300 per person per year (Campbell, 2004).

Table 3 suggests the breakdown of costs of US-quality delivery per piece of mail in a system of universal service in an economy where postal volumes per capita were low, based on data from the Cohen et. al. study and the World Bank. As seen, delivery would be expensive—over \$0.76 per letter in a country with mail volumes of 10 per capita. Even without delivery to the door, the costs are high—over \$0.60 per letter.⁷ Again, this data only suggests orders of magnitude, as it is based on United States' postal data adjusting for input costs. Nonetheless, the point is clear that letter delivery becomes considerably more expensive in low-volume environments, not merely because of rising costs of home delivery, but also because the other fixed costs of the network are divided up amongst far fewer stamp purchases.

**Table 3: Estimated Cost Breakdown of USO Services
in Low-volume Environments**

| | Cost of Mail/Piece (\$) | | |
|-----------------|-------------------------|-------------|-------------|
| | Pieces/Capita | | |
| | 10 | 5 | 1 |
| Mail processing | 0.06 | 0.07 | 0.16 |
| Transportation | 0.02 | 0.03 | 0.07 |
| Window service | 0.08 | 0.13 | 0.34 |
| Delivery | 0.76 | 1.19 | 3.06 |
| Other | 0.44 | 0.69 | 1.77 |
| Total | 1.36 | 2.11 | 5.40 |

⁶ Cohen et. al. Provide data on prices for US quality USO at United States' input costs for various levels of letters per capita. To adjust (at a high level of approximation) for differing input costs (primarily labor), I used a regression of GDP PPP per capita on letters/capita to obtain estimates for GDP per capita at various levels of letters/capita. I then multiplied the "unadjusted" Cohen estimates by (predicted GDP)/(United States GDP) in order to get output cost estimates adjusted for input costs.

⁷ The procedure to adjust the Cohen et., al. estimates was similar to the above except that GDP per capita at a given level of letters per capita was calculated from a regression of GDP on letters per capita for countries with letters/capita values within 50 percent of those listed in the table (0.5 to 1.5 letters, 2.5 to 7.5 letters and 5 to 15 letters per capita respectively).

Making this problem more acute is the fact that a far greater percentage of people in developing countries are difficult-to-serve rural customers—69 percent in low income countries (World Bank, 2002). Income density—an important measure of “demand for postal services per square kilometer”—is far lower in developing countries than rich ones—\$39,000 per square kilometer in sub-Saharan Africa as compared to \$658,000 in high income countries, for example (Kenny, 2002). Both of these factors suggest that even less stringent USO may cost more to meet in poor countries than they would in rich ones.

There is significant variation in all of these numbers—some postal operations are more efficient than others, and deliver more mail at the same level of GDP than others (Kenny and Qiang, 2003). At the same time, some developing countries have very large, very dense postal markets where delivery is far more straightforward. Nonetheless, the point remains that, in most cases, even less stringent USOs would be more expensive per letter than similar obligations in the developed world.

At the same time, the profitable market that might provide cross-subsidy is far smaller, because of the lower level of urban development and large corporate customers. Even in some of the richer, most population-dense, urbanized developing countries about 90 percent of routes are loss-making.⁸ This situation would be worse in countries where only 31 percent of the population were urban (the case in low income countries). The cost and complexity of service delivery, especially in small markets, will help account for the fact that post offices frequently make significant losses in the developing world. Forty-five percent of countries with GDP per capita under \$5,000 see revenues below operating expenses (let alone total costs).

Putting revenues and indicators of costs together suggests the scale of the problem. Low income countries will average total postal volumes lower than 10 million pieces a year. Imagine a national stamp price of \$0.12.⁹ National stamp revenues will bring in perhaps \$1 million per year. This to support delivery to a population of about 10 million that is 69 percent rural and on average receives less than one piece of mail per year.

The price of delivery and the related costs of USOs can be significantly reduced from the hypothetical levels of Table 3, if the USO is realistically defined. In the United States, mail that is nondelivered (i.e., is picked up at post offices) accounts for 21 percent of volume and 67 percent of profits. In Italy, similar numbers are 14 and 42 percent. In other words, avoiding home-delivery dramatically reduces costs even in high-density environments such as in the United States (Cohen et. al. 2003). Abandoning home delivery for a post office box system (the *de jure* case in many developing

⁸ Traffic is measured by revenues, in this case. British Postal Consultancy Service (2002)

⁹ Trinidad and Tobago’s price after rate increases.

countries, the de facto case in the majority) will greatly reduce costs. This has been done in Senegal, for example, where home delivery carries an extra charge. Asymmetric charging can also help raise revenues for rural access. Historically, differential charges applied in now developed markets (Ogilvie, 1893).¹⁰ Furthermore, “universal service” does not have to mean uniform service. In Tanzania, the quality of service is lower in rural areas, with service only provided to post offices, and at D+4 rather than D+1.

Nonetheless, even differential service targets—as part of the USO—are unlikely to reduce costs to allow for a sustainable universal service, to be provided at a reasonable stamp price, on the back of the few profitable urban routes in low income countries. And so monopoly provision, even if efficiently run, would not garner the profits large enough to come close to true universal service provision.

5. AGAINST THE LEGAL MONOPOLY

The two arguments for monopoly provision in the postal sector are first, that the sector is a natural monopoly and second, that the monopoly allows for cross-subsidy of services and so meeting USO targets.

The first argument is not a good argument, even in theory, for enforcing a de jure monopoly. There are some reasons to believe that mail delivery services may be “natural monopolies”. Mail delivery involves a network, and network externalities suggest that one big network serving a given area will, other things being equal, be more efficient than many overlapping networks providing the same service. In other words, if you leave a competitive postal market alone, it is likely that one competitor will eventually win out to control all, or nearly all, of the market.¹¹ But this is no justification for legally enforcing that market from the start. Quite the opposite. It is a reason to regulate the market so that a monopolist cannot take advantage of its position to squash competition and over-charge consumers for services.

Furthermore, the “natural monopoly” characteristic of posts, especially in developing countries, may be oversold. We don't need to go too far from basic posts to see that competition can work even in “networked postal” industries in developing countries—DHL, FedEx, and UPS demonstrate that competition can flourish where obligations are few and prices can reflect costs. And in a developing country environment where total postal volumes are frequently too small to garner significant scale economies, the

¹⁰ The United States only introduced one-price delivery in 1885 (Campbell, 2004).

¹¹ This appears to be the case in a number of developed markets where competition has been introduced—for example, New Zealand and Sweden.

disadvantages of market fragmentation are reduced. Some evidence for this is that in many developing countries, a number of large postal users legally or illegally bypass postal incumbents to provide their own services (in Jordan, legal competitive operators provide services to deliver bills despite serious handicapping, for example).¹²

The widespread bypassing of incumbent postal providers in developing countries suggests that, whatever theoretical advantages to scale may exist, the inefficiency of monopoly government provision frequently outweighs them. Monopolies are likely to be less efficient and less innovative than competitive environments because the usual incentive to innovation and efficiency (the fear of losing customers to the competition) is not there. When the monopoly in question is operated by the government, the “theoretical” problem becomes even more acute. There is not even the incentive to maximize the quality and efficiency of services at a given cost in order to maximize (revenues and) profits. In an environment where the government monopoly service provider provides an inefficient, poor quality service, any “natural monopoly” advantages it should theoretically enjoy are frequently outweighed by the fact that post offices have not been run on sound business practices.

Not only are staffing levels frequently very high, but pricing structures suggest that the post office may even be losing money delivering to what should be their more profitable urban and corporate customers. A monopoly will only produce revenues to fund the obligation if prices, somewhere, are higher than costs. Given under-pricing and inefficiency of many government-controlled postal monopolies, this may be a questionable assumption. Furthermore, service standards remain low—as suggested by the low level of trust in many postal operators. In response to the question “do you trust your country’s postal system sufficiently to have a friend mail a small package worth \$100 to you?” the average survey respondent in Nigeria scored the post office 1.7 on a scale of one (no trust at all) to seven (complete trust) (Kirkman et. al. 2002).

In these cases, not only is an enforced monopoly failing to deliver on the promises of the USO, but by stifling competition, it is forcing people who use the post to use an inefficient and unreliable service provider. For little or no benefit to the rural poor, the monopoly penalizes the corporate and urban user.

The practical example of the benefits of competition over monopoly in a poor developing country is Tanzania, where during a process of

¹² Andress (2004) notes that many developing countries with weak or non-existent regulatory structures nonetheless see more competition than developed countries with aggressively pro-competitive regulators such as the United Kingdom (where Royal Mail still has a 99.75 percent market share).

liberalization, total mail volume increased from 0.87 letters/capita/year to 1.26 between 1994 and 1998 as we have seen, while the postal company moved from loss to profit, and the number of post offices increased (UPU and WB 2001). Prices did rise closer to costs, but consumers were clearly willing to pay higher prices for a higher quality of services.

The second argument for monopoly is that if it were removed in a system of one-price national mail delivery, competitors unburdened by a USO would serve those routes that cost less to service than the price of a stamp. Once competitors had “skimmed the cream” from these routes, the USO provider would be left serving only (or mainly) routes that were unprofitable at the current stamp price, leading to significant losses.

The cross-subsidy under monopoly model is a terribly inefficient way to support access targets, however. We have seen that it is unlikely to provide significant resources in low-volume, largely rural low-income economies. Conversely, in rich countries, the value of the monopoly will be too much, in that the net cost to provide universal service will be very small while the benefit of operating free of competition is considerably larger. Even in (rural, low population-density) New Zealand for example, the incumbent is providing USO services without monopoly and at no additional cost to the government, suggesting that the benefits of universal coverage to the incumbent outweigh any costs even in a competitive environment.¹³ The justification for the monopoly is not practicable, the results of the monopoly, especially in developing countries, are poor-quality services and low use.

It should be noted that the monopoly USO model can work. Trinidad and Tobago has increased household delivery to approximately 95 percent of population under the model, for example, as part of a broader reform effort that saw postal volumes and revenues approximately double, and quality of service and consumer satisfaction increase.¹⁴ But even in a wealthier developing country, where the postal monopoly is delivering a comparatively efficient cost-related service and where the monopoly-funding-USO model may plausibly raise sufficient funds to support rural access, it is still far from the best way of extending access.

¹³ Furthermore, such efforts appear fraught with computational difficulties in practice and require far more market intelligence than most developing country regulators (where there are such regulators) possess (see Andress, 2004).

¹⁴ Walsh, 2001 and comments by Juan Ianni. From 1999 to 2003 delivery times fell from one week to nearly all mail by D+2, volumes rose 133 percent, revenues 75 percent, and a consumer satisfaction index went from 50 percent to approximately 85 percent.

6. A NEW MODEL

At the moment in many countries the “postal sector” is seen as coterminous with the post office. It may be more constructive to view letter and parcel delivery as the “postal sector”. Under this model of market segmentation, some proportion of letters and parcels in developing countries are delivered via the post office, but the post office is but one of several potential service providers in the postal sector. The post office frequently also provides services in other sectors, including the financial and government services sectors.

It is important to make these distinctions because postal policy and regulation should be primarily involved with improving the performance of the postal sector, not the post office. Conversely, the post office frequently has roles in other sectors—it may be a vehicle for the delivery of a range of government services, for example. Ensuring the effective delivery of this wider range of services is the concern of many parts of government—the financial regulator for banking services, for example, or the transport department if the post office is involved in vehicle license issuance and delivery. Suggesting that postal policy and regulation should be about improved postal sector performance, and understanding that the post office’s current and potential role spans many sectors, may help to clarify the roles and objectives for different parts of government and for the post office itself, allowing for a new model of both postal and government services delivery.

Whatever is decided about the services provided to every citizen, in the poorest countries the monopoly-supported USO for letter delivery is likely to be unworkable and damaging to consumers of postal services. The first two steps on a path to postal sector reform should be to abandon the monopoly and seriously reconsider the postal USO.

At the same time, in many countries, the most important social function of the post office is not as a letter delivery mechanism, but in delivery of pensions, financial services, or other activities. In many developing countries, postal payments represent over 50 percent of total postal revenues, and post offices remain the principal point of access to financial services for many in the working population (Walsh, 2001). Many post offices also act as the interface for government-to-citizen interaction such as license payments. Under those circumstances, what users most want is “universal access” to those services, not necessarily to letter delivery. Adding together this bundle of services that post offices frequently deliver, governments may well decide that it is vital for the great majority or all of citizens to be able to reach the service delivery point.

One possible model to deliver these services under a competitive regime might involve a system of local communications franchises providing customer services supported by a competitively-selected logistics firm

providing delivery services both between franchises and with interconnection points to other postal and logistics companies.

At the local level, private franchises operated by a local entrepreneur would provide communications and services in every town or village with more than a minimum sustainable number of people. The government, as part of a participatory process, would set certain minimum services and standards that must be provided by the franchise. Such minimum services might include providing a PO box on the premises, sending a standard letter from one region to another, provision of basic banking facilities or issuance of pensions, for example. It is unlikely that delivery services would be part of this minimum basket, especially in poorer developing countries. The minimum (government-mandated) basket of required services offered by these franchises would be offered at prices that reflect costs, and these prices would be regulated where necessary. In addition, the franchisee would provide any other services it chose –perhaps photocopying services or Internet access, for example. The franchises (one per town or village) would be auctioned to the highest bidder or, if no one was willing to pay, a subsidy auction would be used.

Concerning inter-regional delivery, this could be done either by the national post office, or auctioned off to a private company, which would provide (comparatively infrequent, regular, sustainable) physical collection and delivery to the franchises, picking up mail from a set number of interconnection points. If a private company is used, this company would also be selected competitively, and it would receive a regulated (cost-based) amount per item delivered to or taken from the franchise plus (if required) an up-front subsidy. The company and franchises would have to provide letter delivery between post franchises at one price nationwide. Any of the private operators involved (local, regional or interregional) would be free to provide other postal services, but would have no monopoly on service delivery. By decoupling the service delivery function and making this a competitive function, one would avoid the problems of inefficiency and unsustainability of monopoly delivery apparent in low-income countries.

Of course, it is important to make the point that this paper has been based largely on generalities and averages. There will be developing countries where a monopoly-enforced cross-subsidy model is providing services of value to the rural poor and where they are doing so at some reasonable level of efficiency. Furthermore, the record to date of reform is patchy, suggesting we have more to learn about how to operationalize the competitive model.

Nonetheless, it is likely that moving from an unworkable monopoly model designed to deliver a service in low demand, to a functioning competitive model that delivers a range of services that poor people find

important and that might have a dramatic impact on quality of life, at little cost in many developing countries. Even taking just the first steps of abandoning the monopoly postal USO would be significant progress.

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