

# **RETURN OF ROAD USER CHARGES - A BUMPY RIDE TO RE-FORMS**

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**Abstract:** Road user charge (RUC) is an old concept with wide appeal but divergent applications. In the Philippines, it has been manifest – except in name -- in such charging instruments as tolls, fuel levies, and vehicle license fees. Lately, it has resurfaced and wound its way into legitimacy, but not after being mangled in the political gauntlet. The paper dwells on the methodological problems, as well as policy issues, involved in determining and allocating the RUC burdens. The outcomes of past and present struggles at introducing road finance reforms could have been different, if not for the timing and lack of a RUC ‘champion’. The journey to full-blown RUC has been glacially slow, and may yet be overtaken by modern trends towards highway commercialization and the phasing out of RUC.

## **1. OBJECTIVE OF REFORMS**

The motivations for reforming the Philippine road transport sector is to have good roads – safe, sustainable, at reasonable cost that is fair. These can be achieved in two ways: (i) through a new system of highway management that delivers value for money, and (ii) by re-structuring the road financing system that enlarges the money pool as well as improves spending decisions.

The first route entails the adoption of a commercial framework -- where roads are viewed as a business rather than a social service, and the streamlining of DPWH. The second route means reforming the system of road user charges (RUC) – covering vehicle registration charges, import and sales duties on the purchase of vehicles, and taxes on gasoline, diesel, and lubricants used by motor vehicles. This paper deals with the second route, which may not be as tortuous as the first, but nevertheless also fraught with obstacles, as can be gleaned from the following sections.

## **2. REVIEWING THE BASICS**

By its very name, road user charges (RUC) refer to payments made by vehicle owners for the use of the road network. It is based on the underlying principle that those who benefit from the use of the roads should pay for them. Where user charging prevails, no one receives service without paying for it, nor pays without receiving the service.

Its application in practice is not as easy, because a direct transaction – such as those in tolled highways or where electronic road pricing operates-- is often not possible. Hence, several approximations are used. The method of charging for the use of the roads is classified in **Table 1**. The administrative characteristics often dictate the choice of instruments.

Fuel levy is a favored taxing instrument – both for road user charges and general revenues, because of the administrative ease and large yield. It must be noted, however, that the choice may well change as new technologies evolved.

Also, not all taxes using any of the aforementioned method can be considered RUC. Take the case of fuel tax and import duties. These two revenue instruments partake of a general tax, i.e., without any relation to road usage. Hence, only the amounts paid by the road sector that are in excess of the general tax levels are classified as RUC. In some instances, RUC has a restricted meaning – a special levy imposed on diesel-powered trucks and distinct from fuel and import duties.

**Table 1 – Methods of Charging for the Use of the Roads**

Charging Instrument	Related to Road Use	Easily Recognizable	Administrative Characteristics		
			Collection Cost (%)	Avoidance or Evasion	Ease of Collecting
Tolls	Yes	Excellent	10-20	Moderate	Simple
Vehicle license fee	No	Good	10-12	High	Moderate
Heavy vehicle license fee	Not directly	Good	Unknown	Unknown	Simple
Fuel/Petrol levy	Partly	Good	Negligible	Low	Simple
Weight-distance fee	Yes	Excellent	5	Moderate	Moderate
Parking charges	Partly	Good	Over 50	High	Simple
Cordon charge	Partly	Moderate	10-15	Unknown	Simple
Area License	Partly	Moderate	10-15	Unknown	Simple
Electronic road pricing	Can be	Good	Less than 10	Unknown	Simple

Source: Hegie, 1995, p.63

There is no ‘right way’, or normative model, to structure road user taxation (Bahl, 1992). Payments made by the road transport sector play many different roles in public policy. In some countries the objective might be to ration road use, in others to finance the construction and maintenance of the highway network, and in others it might be for general revenue support.

### 3. THE RUC EQUATION

#### 3.1 The Revenue Side

Taking the loose meaning of RUC, it can be stated that the Philippines collected nearly P81 billion from the road transport sector, of which 46% came from fuel taxes. However, only P19.7 billion (= 24% of P81 billion) can be considered as RUC as shown on **Table 2** and after netting out the standard indirect taxes -- such as the 10 percent value-added tax (VAT) and import duties. The standard import duty in the Philippines is 14.3 percent, so any vehicle charged higher than this rate is considered to be paying RUC equal to the excess amount. For example, heavy cars pay 124.4 % import duties and jeepneys pay the equivalent of 12.2%; thus the former contribute to RUC while the latter does not.

**TABLE 2 Estimation of Philippines RUC Revenues, 1997**

(in billions of pesos)

Tax	Vehicle Purchase	Reg. Charges	Parts	Tires	Gas	Diesel	Total
Import duty	4.72		2.45	1.79	4.60	6.90	20.46
Excise tax	7.09		0.00	0.00	17.40	8.20	32.69
VAT	14.48		8.41	1.81	0.00	0.00	24.70
Total actual taxes	26.30	2.87	10.86	3.60	22.00	15.10	80.72
Less standard taxes	27.22		20.75	3.24	4.29	5.49	60.99
<b>Road user charges</b>	-0.92	2.87	-9.89	0.36	17.71	9.61	19.73

Note: The minus signs indicate that vehicle users enjoy concessions on vehicle purchase and parts.

Source: *Better Roads Philippines—Draft Final Report*

### 3.2 The Cost Side

In a system of road charging, rates on the revenue side are determined in relation to costs.

On the cost side of the ledger are the following: (a) *damage costs* resulting from the passage of vehicles (i.e., the variable costs of operating and maintaining the road network); and (b) *externalities* - the additional costs imposed by each road users on other road users and on the rest of society (i.e., the costs of congestion, damage to health, accident costs). The latter category is difficult to quantify.

The total amount spent in 1997 on national roads was P23.3 billion, of which 3.6 billion pesos were allocated to maintenance and P19.7 billion to “other road purposes,” mainly on new construction. From 1987 to 1997, the expenditures on road maintenance averaged P1.8 billion/year, while those for investments averaged P12.1 billion/year. Are these adequate?

It has been estimated that the Philippines need P13.4 billion to keep its 27,895-km national roads in a stable class and sustainable basis. Therefore, it has been under spending on road maintenance, or put another way, the country has been living off its road assets. In a regime where road spending decisions are made rationally, maintenance would be first priority. The economic returns are generally higher than prevailing hurdle rates, or even for new roads under construction. Maintenance cost includes: (i) *routine maintenance* for patching, surface dressing, ditch and drainage cleaning, and vegetation upkeep and control; and (ii) *periodic maintenance* for repairs of pavement structure and subsoil to remedy permanent deformations and cracking caused by overloaded trucks and buses, bad pavement design, inadequate soil-bearing capacity and material strength, defective drainage, substandard construction, road work by other public utilities, and insufficient maintenance.

The jury is still out on whether the amounts poured on new roads had been insufficient, or more than enough. DPWH’s proposed road investment program for 1999 to 2004 requires an annual expenditure of ₱32 billion/year – to pave existing roads as well as push road density closer to the 1.0 km/sq km target. In a study of 50 countries and 35 cities (Ingram, 1999), the vehicle-to-road ratio of the Philippines appears to be more than adequate. This finds support in the comparative road densities of selected Asean countries – where the Philippines (with 0.63 km/sqkm) fared better than Malaysia (0.20), Thailand (0.42), Indonesia (0.19), and Vietnam (0.46).

## **4. POLICY ISSUES**

### **4.1 Should the Accounts Be Balanced?**

Should RUC be raised to cover road expenditures? The prevailing orthodoxy, at least in the Philippines, is in the affirmative. Since expenditures exceeded RUC revenues in 1997, a case can therefore be made for increasing RUC to wipe out the P3.6 billion deficits in the RUC accounts, as well as cover the historical under spending on road maintenance.

Economic theory (Walters, 1968), however, is not as categorical in prescribing a balanced budget since blind adherence to such objective may lead to waste. Furthermore, the method of charging would invariably lead to deficits in the (uncongested) inter-urban and rural roads, and surpluses in the congested urban roads. Balancing the accounts would then lead to the paradoxical policy of increasing the charges on rural roads far above economic levels and reducing those in urban areas where demand tends to be inelastic. The danger is magnified when one considers that the vast majority of studies on road user charges – the 1984 and 1999 studies on Philippines included – dealt only with inter-urban roads, inclusive of rural roads.

For administrative and social reasons, a balanced road budget is appealing. Furthermore, net economic benefit is maximized when road user charges are set equal to the cost of the resources consumed when using the road network (Hegje, 1997). These costs are generally referred to as short-run marginal costs, SRMCs. To avoid the policy paradox that might ensue from it, a balanced road budget needs to be tempered by applying it across all types of roads, i.e., without distinction or separation of accounts between inter-urban, urban, and rural roads.

### **4.2 Distributing the Pain**

To increase RUC revenues, the Philippines could either: (a) raise the annual vehicle registration charges, (b) impose a levy on fuel, (c) increase the import duties for vehicles that are now paying less than the standard tax rates, or (d) a combination of all three.

The most robust source is the fuel levy, in the sense that a slight adjustment generates a huge amount and the existing tax rates are still low compared to other countries. Also, consumption is highly correlated with use or distance. The downside is that it is difficult to tap under the prevailing policy climate. It is also a blunt instrument, since taxing petrol side-swipes non-road users.

Adjusting the import duties for some vehicle class with negative RUC contributions – especially sport Utility Vehicles and small, medium and articulated trucks – was seen as less controversial than fuel levy. However, any amount raised could not be earmarked to a special fund without affecting also the tax payments of other vehicle classes (which are positive RUC contributors).

The annual motor vehicle registration payment is, probably, the least contentious of the RUC instruments. After all, it has remained static for more than 14 years for cars and 20 years for trucks. Vehicle owners as a class are also perceived as better off. However, it has

two handicaps: (i) the starting base is small – only P2.9 billion in 1997, and therefore would entail steeped increases over existing rates; (ii) not as elastic with usage.

Ideally, the whole array – import duties on vehicles, levy on fuel consumed by motor vehicles, and the annual registration fees – should be considered in relation to total costs.

With a broader menu of RUC instruments, it is easy to apply the recommended two-step approach (Hegie, 1995) to calculate the rates, viz.: (i) separate variable costs from fixed costs, with the former deemed to approximate SRMCs; (ii) distribute the variable costs to the different vehicle classes, a portion that varies with vehicle kilometers and another that varies with axle loading.

Except for the motor vehicle registration charge, all other avenues were foreclosed to the study (AGILE, 1999). As a consequence, only road maintenance was evaluated on the cost side. This limitation reduced the problem into how P13.4 billion, or only a portion thereof, say  $M_1$ , can be apportioned among the vehicle population. With minor adjustments and simplifying assumptions, the aforementioned 2-step approach could be applied to calculate the rates.

Damage is related to several factors, including traffic volume and composition, and to non-traffic factors, such as soil and weather conditions, quality of road construction, road design standards, and road maintenance practices. The proportion,  $\Phi$ , of damage from each factor varies from case to case; thus  $\Phi_1$  = the ratio of total road damage cost attributable to traffic,  $\Phi_2$  = due to axle loads, and  $\Phi_3$  = due to weather. In general, weak pavements suffer more from vehicular traffic than strong ones. In short,  $M_1 = f(T, W)$ , where T = factors due to traffic, and W = weather factors. Very few studies are available to measure W; a 1985 study on road deterioration posited that the cumulative damage attributable to W is in the range of 10 to 40 percent for roads that are in the low- to medium-strength range. On the other hand, T is easier to estimate, and results from axle-load (TL) and vehicle kilometers (TK). Predicated on the concept that road space is valuable, and therefore use should partake of a rent, TK can be modified to become  $TS = TK * PCU$ . Thus, the amount to be raised,  $M_1$ , is computed as follows:

$$M_1 = \sum_{i=1}^n \{ \Phi_1 * \frac{TS_i * M_1}{TS} + \Phi_2 * \frac{TL_i * M_1}{TL} + \Phi_3 * \frac{W_i * M_1}{W} \}$$

where i = the i-th vehicle class, and n = number of vehicle categories

$$\Phi_1 + \Phi_2 + \Phi_3 = 1.00$$

$W_i$  = number of vehicle of class i over total vehicle population

The result of the allocation per vehicle unit is shown on **Table 3**, where  $M_1 = P13.4$  billion. Because of the lack of data on what  $\Phi_i$  should be and what portion of the variable costs vary with traffic and what vary with load, different scenarios of traffic, axle-load, and weather factors were assumed: A = {  $\Phi_1 = 72\%$ ,  $\Phi_2 = 18\%$ ,  $\Phi_3 = 10\%$  }; B = {  $\Phi_1 = 48\%$ ,  $\Phi_2 = 12\%$ ,  $\Phi_3 = 40\%$  }; C = {  $\Phi_1 = 65\%$ ,  $\Phi_2 = 25\%$ ,  $\Phi_3 = 10\%$  }, and D = {  $\Phi_1 = 36.8\%$ ,  $\Phi_2 = 39.1\%$ ,  $\Phi_3 = 24.1\%$  }.

**Table 3 – Allocating Road Damage Cost to Vehicle Class**

Vehicle Class	No. of Vehicles	Vehicle Kms, TK x 10 <sup>3</sup>	ESAL-Kms, TA x 10 <sup>3</sup>	PCU	PCU-Kms, TS, x 10 <sup>6</sup>	Road Damage Cost/Vehicle			
						A	B	C	D
<b>Cars</b>	780,433	13,267,361	1,486		1.327				
Light	628,256	10,680,352	776	1.0	1.068	2,400	2,999	2,208	2,024
Medium	142,846	2,428,382	522	1.0	2.428	2,400	2,999	2,208	2,024
Heavy	9,331	158,627	188	1.0	1.586	2,402	3,000	2,210	2,028
<b>UVs</b>	1,223,079	30,467,901	185,814						
Jeeps	312,018	5,304,306	385	1.0	5.304	2,400	2,999	2,208	2,024
Vans	633,366	12,667,320	53,094	1.5	1.900	3,923	4,014	3,587	2,817
Jeepneys	277,695	12,496,275	132,336	1.5	1.874	8,333	6,954	7,588	5,139
<b>Buses</b>	32,657	506,183	688,526		1.215				
Small	6,554	101,587	4,049	2.0	2.032	4,096	4,129	3,770	2,999
Large	26,103	404,596	684,477	2.5	1.011	7,704	6,535	8,343	9,337
<b>Trucks</b>	244,816	6,120,400	21,951,321		1.502	17,043	12,761	20,032	
Small	105,302	2,632,550	2,160,837	2.0	5.265	8,412	7,007	8,689	8,698
Medium	56,316	1,407,900	3,430,819	2.5	3.520	14,137	10,823	15,933	18,715
Large	63,648	1,591,200	11,433,279	3.0	4.774	28,137	20,157	34,669	46,707
Semi-trailer	19,550	488,750	4,926,387	3.0	1.466	35,782	25,253	45,287	63,314
<b>Motorcycles</b>	912,615	20,533,838	42	0.5	1.027	1,730	2,552	1,603	1,681
<b>TOTAL</b>	3,193,600	70,895,683	22,827,190		8.282				

Among the salient conclusions that can be deduced from Table 3 are as follows:

- (a) A jeepney has to pay nearly twice that for a van;
- (b) Cars, whether heavy, medium, or light, should pay the same rate;
- (c) A large truck should pay about 4x that of a large bus;
- (d) A motorcycle has to pay at least ₱1,600 compared to its existing rate of about ₱150

### 4.3 Advocating a Bitter Pill

Obviously, direct application of the methodology will invite strong reactions. It would mean convincing jeepney owners – which comprise a sizeable and organized block – to agree to 760% increase, 577% for large truck, and a reduction of 52% for the owner of a heavy luxury car. That combination would be an act of political suicide -- and be construed as regressive. Part of the problem lies in the total amount to be covered. The P13.4 billion target can be reduced, if 40% is attributed to weather and therefore tantamount to a fixed cost. Another problem is the distorted base from which the new rates will be compared. For a long time, heavy trucks and jeepneys have enjoyed subsidies; removing them overnight would not elicit praises from un-organized private car owners.

Assuming rationality and acquiescence to common good, vehicle owners should accept the bitter pill contained in the Congressional Bill, perhaps with re-enforcement from any or all of the following:

- (a) The RUC rates are ‘not as bad as they may seem’ – For example, vehicle registration charges have remained unchanged for 14 years in the case of cars and 20 years in the case of trucks and buses. From 1987 to 1997, the consumer price index have gone up by 242%, average family income rose by 307%, minimum wage went up by 345% in

Metro Manila, road maintenance unit expenses jumped by 478%, and vehicle population grew by 272%.

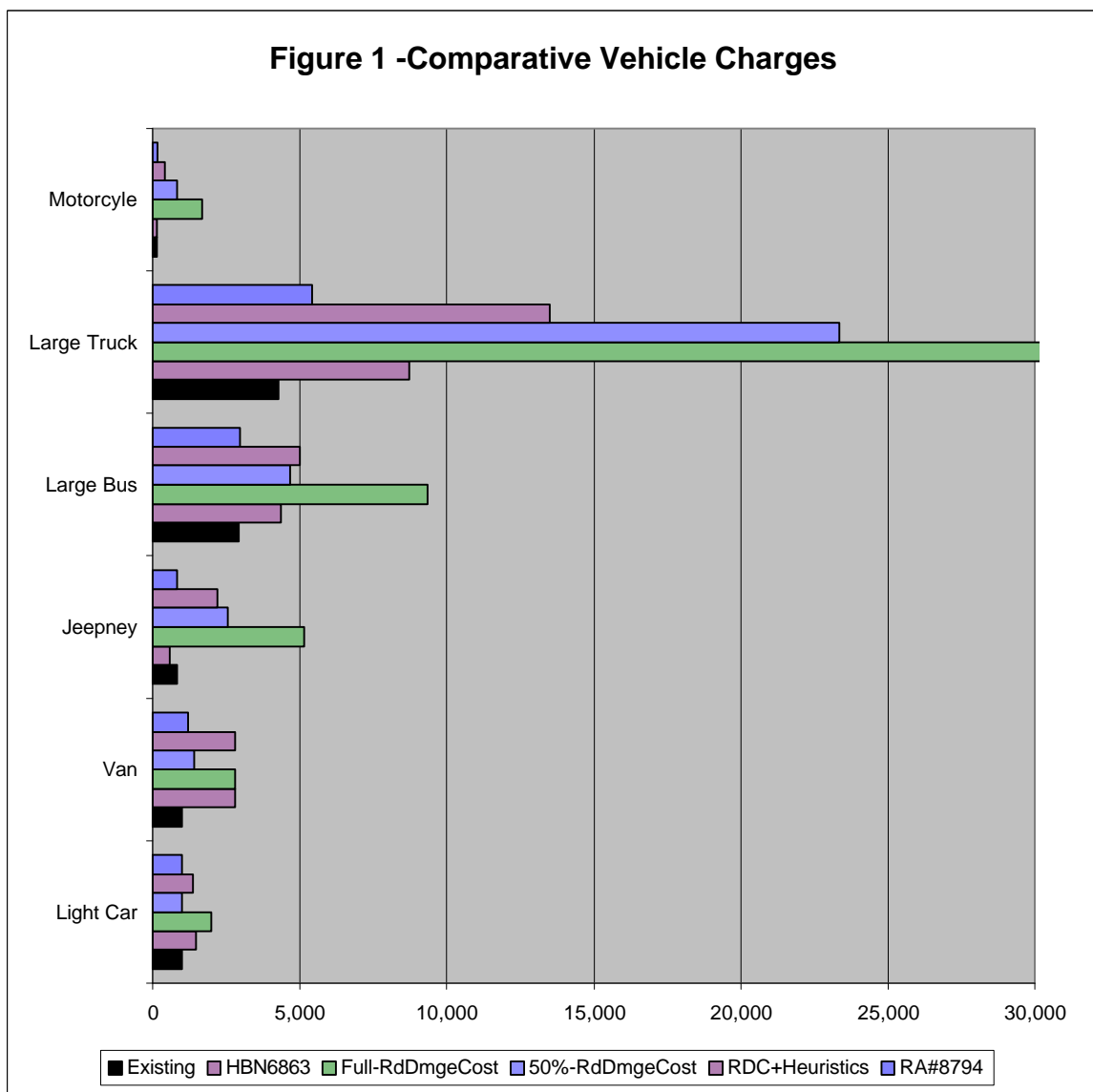
- (b) The consumer benefits of well-maintained roads, to which the monies will be earmarked, are higher than the costs – Studies in other countries have shown that for every dollar saved on road maintenance, vehicle operating costs increase by a factor of 2 to 3. Since the government had been scrimping by as much as P6.0 billion a year, vehicle owners could potentially save ₱12.0 billion a year.
- (c) Lowering the ‘dosage’, such that the rate re-balancing is made gradually through time rather than overnight – Moderating the annual increases to 25% or less would stretch out the curing period and makes the scheme affordable.
- (d) Lowering the target revenue,  $M_1$ , to P6.0 billion, since about P7.4 billion can be reasonably assumed as fixed cost – There is really nothing sacrosanct about the ₱13.4 billion target. Besides, vehicle registration charge is analogous to an access charge into the road network.
- (e) Involving the road users in the eventual disposition of the funds - A Road Board can be constituted with membership from the road users, with the power to decide on the allocation of funds.
- (f) Revealing the ‘evil effects’ to be false – This is similar to the first, but quantifies the minimal effects to consumers. For example, increasing the annual vehicle charge by ₱1,000 for jeepneys translate to less than 2 centavos per 10-km trip or P3.00 additional boundary fee to the driver. The full charge of ₱6,990 to a regular Metro Manila bus would mean less than 2 centavos more per 10-km journey.

Unfortunately, as discussed later, expectations of rationality and commitment to common good were misplaced. Figure 1 illustrates the vehicle registration charges of selected vehicles under different schemes of distributing the burden. One of the schemes, labeled as Heuristics+RDC, entailed a series of adjustments to the resultant rates (at 50% cost recovery of road damage cost) with a floor of 20% increase and a cap of 250% over the existing.

#### **4.4 Should there be a Dedicated Fund?**

Highway authorities generally favor a dedicated road fund. In contrast, macro-economists and finance officials are enamored with the single-fund concept and resist efforts to establish a separate fund or account. The choice is not obvious [see Gwilliam and Shalizi (1999)] and depends on national circumstances: a well-functioning budget process makes a road fund superfluous; but without a dedicated fund, a road agency cannot proceed to operate on a commercial basis.

The Philippines used to have a Special Fund under the Philippine Highway Act of 1953. It was abolished in 1973. Since then, the funding for road investments and maintenance has to fight it out in the budget allocation dynamics. The perennial casualty of the political horse-trading is road maintenance. If only to correct this distortion in resource allocation, a dedicated road fund is justified. More so, with an annual budgetary process driven by political negotiation and compromise, rather than well, by economic efficiency arguments.



Japan, USA, and Germany have their respective dedicated road funds. France and the United Kingdom do not (Nakagawa, et.al., 1998). The quality of roads in one group is not any worse off, nor any better, than the other group.

## 5. THE LONG WINDING ROAD

### 5.1 Earlier Flirtations with RUC

The first time the Philippines tried to reform its road user charges was in 1984. Almost after the completion of a study, a law was signed that imposed a schedule of road user charges by type of vehicle, on top of the annual vehicle license fees. Although Presidential Decree No. 1934 simultaneously revised the registration fees, common carriers tax on public transport, and incremental RUC, its main target was the heavy trucks. Thus, trucks with 2 or 3 axles were supposed to pay ₱60 per 100kgs of gross vehicle weight while trucks with 4 axles or more were to pay only ₱20 per 100kgs. Almost 3 months after its issuance, the law was amended to bring down the rate for 2 and 3 axle trucks from P60 to



P40 per 100 kgs. Before the new and revised charges could be implemented, however, they got repealed by PD No.1950 – which also replaced the annual license fees for private motor vehicles with the private motor vehicle tax. Road tax reforms had to be withdrawn by an administration in the throes of declining popularity and faced with the worst post-war economic crisis the country ever had.

Then in 1991, a modest attempt to remove the irrelevant for-hire category for trucks and to impose RUC on heavy trucks was made as part of the government's policy commitment to ADB. The attempt managed to reach only first base in a Congress more concerned with the 1992 national election.

## **5.2 Current Vintage**

After 7 years of hibernation, the Department of Finance revived the RUC initiative with the primary objective of raising revenues. With prodding from the new administration, House Bill No. 6863 was filed in February 1999. It covered only the annual vehicle license fees. Excluded from its coverage were other RUC instruments. Among its salient provisions, compared to the existing system, were: (i) removal of rate differential between diesel and gas-fed engines; (ii) no rate discrimination between old and new vehicles; (iii) no rate discrimination between for-hire and private buses and trucks, but for-hire jeepneys and taxis would enjoy preferential rates over similar private vehicle classes. Analysis of the schedule of charges contained in the Bill failed to uncover any empirical basis nor controlling principles. Nevertheless, the Bill managed to pass through the House in November 1999. The Senate came up with its own version, known as Senate Bill No. 1830, which picked up a number of recommendations from the 1999 RUC Study. It passed the Senate on third reading on 11 April 2000. The final version – hammered out by the bicameral conference committee – departed from the House or Senate versions in terms of rate schedules.

## **5.3 Twixt the Cup and the Lips**

There was obvious softening of support to the legislative measure – from the time it was filed in the House to the time it reached third reading in the Senate, or a span of one year. Organized transport groups were muted in their opposition during 1999. Even the debates in the House were not as dramatic. But by December 1999, the tides changed. The popularity ratings of the incumbent President nose dived – from 34% net satisfaction in March, to 2% in October, and a negative 8% in December 1999 – based on the SWS surveys (Javellana, 2000).

The organized transport groups – led by the jeepney owners – threatened a nationwide strike in March 2000 and demanded huge concessions. The result – a battered down RUC bill that became Republic Act No.8794 by end of June 2000. Prior to the law's signing, newspapers and some prominent Congressional leaders even demanded a Presidential veto on the ill-informed argument that “the road user tax is now inopportune and would only add to the financial burden of an already heavily burdened people.”

Was the law, R.A. No. 8794, really that bad? The annual registration rates, renamed Motor Vehicle Users' Charge or MVUC under the new law, and the object of public transport

groups' ire, were very tepid (see figure 1). Instead of correcting the rate imbalances among vehicle classes, or creating a process for their subsequent corrections, the law essentially took the old rates and jacked them up by 25% every year for the next 4 years. The heavy trucks that cause the most road damage will continue to be subsidized. It produced a dedicated fund for road maintenance, among four special funds, but it was of the 1<sup>st</sup> generation type where the spender virtually gets a license to spend. It provided for a weak Road Board with ambiguous power over the funds.

#### 5.4 On the Slow Lane

Countries under different circumstances take different paths, or follow their own rhythms, to reform their RUC system. How the Philippines fared on the reform road – against USA and New Zealand -- is shown in Table 3. It has taken the Philippines nearly 16 years to take a small bite. It took the USA 17 years to correct the rate imbalances. New Zealand took the plunge early -- in the 1970s, and quickly (only 4 years of gestation); it has since improved the system three times over.

**Table 3 -Time Taken To Revise Road User Charge**

<b>United States</b>	<b>New Zealand</b>	<b>Philippines</b>
1956 – Highway Revenue Act laid the basis for a system of road user charges and created Highway Trust Fund	~1973 – Revenue from road users fall due to energy crisis;	197_ - A dedicated Highway Fund was abolished.
1962 – Study on road user charge completed. Recommended changes to preserve equity between vehicle classes; adopted in Federal Aid Highway Act	1973 – Consultant study recommended, among other things, revision in structure of road user charge to promote efficient inter-modal competition	1984 – Study on road user charges completed. PD No. 1934 issued in June 1984, which imposed a schedule of road users' charge by type of vehicle, in addition to annual vehicle license fees.
1965 – Supplemental study recommended heavy vehicle taxes, not accepted by Congress. Rejected again in 1966.	1977 - A new Road User Charges Act passed, to raise revenues as well as promote efficient inter-modal competition	Oct. 1984 – PD No. 1958 repealed PD No.1950; it replaced the RUC with a private motor vehicle tax, in lieu of annual vehicle license.
1970 – A further cost allocation study confirmed need to revise taxes on heavy vehicles	1978 – New system introduced. It provided for periodic review.  1984 –2nd review recommended a revised cost allocation methodology	1991 – Government commits to ADB, among other measures, to certify a Road User Tax bill that will replace common carriers tax. Forthcoming election, precluded action on the Bill.
1978 – Surface Transportation Assistance Act directed DoT to undertake another study.	1985 – New RUC system recommended by review panel became effective.	1999 – House Bill No. 6863 passed on 3 <sup>rd</sup> reading; seeks to impose a Motor Vehicle Users' Charge in lieu of the annual license fees on public vehicles and the private motor vehicle tax
1982 – Cost allocation study completed. Congress passed law revising road user charges, including substantial increase in heavy vehicle use tax.	1996 – A dedicated national road funds was created and placed under TransFund NZ	Dec. 1999 – Senate approved its own version of the MVUC Bill, under Senate Bill No. 1830.
	1997 – Report of the Roothing Advisory Group detailing further improvement measures to year 2001, including transition from RUC to direct charging	July 1, 2000 – Malacañang announced that President Estrada has signed Republic Act No. 8794, otherwise known as the Motor Vehicle Users' Charge law.

*Source: Data on USA and New Zealand taken from Hegie's 1991 paper; supplemented by the author's own research on New Zealand and Philippines.*

What makes countries run faster, or slower, on the reform road is an issue best left to future researchers to fathom. Ten to fifteen years is considered par for the course (Hegie, 1991).

In the Philippine case, timing was key. In 1984, a strong regime was at the end of its ropes. So it retreated and withdrew what could have been a major reform. Then in 1991, a reform-minded leadership could have pushed the right measure through Congress, had it not been for a series of coups that diverted its attention. In 1999, had the popularity of the administration not been at its ebb, a sounder RUC measure could have emerged. Aside from the wrong timing, what could have spelled a difference on the reform road is the bold presence of a “champion”. During all three occasions, much more so during the last one, no one emerged or was bold enough to champion the RUC cause.

## **6. THE FUTURE OF RUC**

The Philippines has taken a small step, albeit hesitant and wavering, towards reforming its road financing system.

To be sure, the empirical basis for distributing the road user charges among different vehicle classes and the amounts to be raised from each of the available charging instruments can stand improvement, and be the subject of further research. However, cognizant of the humps and potholes along the reform road, further refinements and accuracies in RUC methodologies may be meaningless.

Of what use is a better answer when the question has been changed?

With the radical changes being wrought by such technologies as global positioning satellite, electronic road pricing, intelligent transport systems, and smart infrastructure, the future of RUC could be vastly different from the present. Charges to road users could potentially become place-specific, time-determined, and congestion-dependent. Instead of an average price for road use, road charges would be related to time of travel, type of roads traveled on, location of those roads, and the type of vehicle used. When a commercial transaction can be done directly at the retail level, between a road user and a road provider, then collection into road fund will become superfluous and private sector provisions of road will be more abundant. Road companies could then become responsible for setting prices and collecting revenues. To date, such a situation is conceivable only in tolled limited-access roads. It is also being mimicked in other places through a concept known as ‘shadow’ tolls.

But the future of RUC might be glimpsed on what is happening in New Zealand. Not only has it radically-restructured its system of highway management – separating the funder, the client/provider, and deliverer for state highways—it has innovated on road finance far more than any other country in the world. Since 1997, New Zealand has made RUC a distance/weight charge to ensure that diesel-driven vehicles pay for the wear and tear they impose on the roads. Truckers could buy RUC license at any time (without deviating from their route, or just-in-time before coming to a Police-operated weighing station), anywhere (from a computer terminal installed in the trucker’s office, from a Post Office, at a petrol station), and pay the cost electronically. A trucker is simply asked what type of license he

wants, the distance, vehicle type and weight; and a central computer calculates the RUC and debits the bank accounts after acceptance of the cost by the trucker.

If plans do not miscarry, New Zealand will start phasing out their RUC and petrol levies beginning July 2001 and shift to more direct charging. Two years after, or by 2003, when it expects 80% of total collections done on the direct-charging method, New Zealand plans to close its RUC system and abolished its dedicated road fund.

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