

# 4

## Motor Vehicle Registration Systems (MVRS)

### 4.1 Section - I Relevance & Importance of Vehicle Registration Systems

4.1.1 Vehicle Data - or in the context of modernizing the trucking industry - detailed and accurate data of trucks, is a primary need of the envisaged integrated framework and operating environment.

4.1.2 The vehicle registration system is the repository that contains such data and information which several stakeholders require and need to access, for the efficient functioning in their respective domains and further, in an envisaged integrated environment. The registration system is a functional domain of the Motor Registering Authority (MRA) of the Excise & Taxation Department (E&TD), falling under the purview of the Provincial Governments, Government of Azad Jammu & Kashmir, and the Federally Administered Islamabad Capital Territory, Northern Areas and Tribal Areas.

4.1.3 The Motor Vehicle Registration System (MVRS) is important, not only for the direct functioning of the E&TD, but also for other stakeholders that need to interact with the system. The capability to access data from the system and also to interact with it enables the registration system to be more accurate,

reliable and meaningful. Therefore, in the integrated environment, the enhanced role of Vehicle Registration Systems is not just providing vehicle data but also to become the channel for a proactive and two way relationship between the E&TD and External Stakeholders.

4.1.4 A unique and distinguishing feature of the Vehicle Registration System, in comparison with other registration and licensing systems, (i.e. Land Registration, Firearms Licensing, Persons Registration/NIC, Passport, etc), is that the **registered entity (the vehicle) is subject to constant change** (of characteristics and ownership). This renders the data more dynamic and susceptible to change, in comparison with data in other registration and licensing systems. As such, the vehicle registration system, to be a reliable repository of data and information, should be capable of managing a wider variety and complexity of transactions and queries, in comparison with other registration and licensing systems. Commencing from the time that the entity (the vehicle) enters the environment, the system needs to be a reliable repository of all transactions which take place, terminating only

when the entity (the vehicle) is ultimately scrapped or de-registered.

4.1.5 Apart from the E&TD, the external user groups or stakeholders that rely upon the accuracy of vehicle registration data and need to have a two-way and proactive relationship in an integrated environment, include:

i) **Security, Crime Control, Legal Compliance (Police):**

For investigating vehicle-related and vehicle-assisted crimes, checking status of vehicle ownership, credentials, motor and road taxes, vehicle fitness certification, commercial route permits, etc.

ii) **Vehicle Fitness Testing & Certification (MVE):**

For checking data to ensure that growing vehicle populations, capable of attaining higher and potentially more dangerous speeds on a continuously improving road surface, are subject to age and time measured checks and periodic re-certification for fitness and road-worthiness.

iii) **Vehicular Pollution & Environmental Protection (EPA):**

For having access to vehicle, engine, fuel data and statistics, and for checking and monitoring engine and exhaust emission levels, through a penalty system based on enforcement of offending vehicles and operators.

iv) **Safety & Penalty System Management (NH&MP):**

For having a database that can maintain data on penalty points accumulation and distinguish

between driver and vehicle related offences separately, in line with the provisions of the National Highway Safety Ordinance (NHSO-2000).

v) **Urban Transport Planning and Management (Transport & City Development Authorities):**

For ensuring the efficiency of urban road transport systems through a systematic approach of route planning and traffic balancing, public transport route permits issuance and route time table management, infrastructure planning and management of bus stops, stands and workshops.

vi) **Fuel Production, Imports, Pricing (Ministry of Petroleum):**

For data relating to fuel types, consumption quantities, user types, vehicle categories and classes and types, as the basis for import, pricing and subsidy structures and planning / policy decisions .

vii) **Taxation & Documentation (CBR):**

For vehicle and owner related data and information, required for integration between systems and longer term objectives of achieving improved documentation and broadening of the tax base and tax payers net.

viii) **Highways and Roads Infrastructure (NHA and Local Authorities):**

For cross-sectional statistical data of vehicle and traffic density, as the basis for proper planning of road and highway networks, road asset maintenance and traffic engineering.

## **4.2 Section – II Limitations of Traditional Legacy Vehicle Registration Systems**

4.2.1 In most emerging and developing countries, like Pakistan the vehicle registration systems were designed several decades ago. The systems – including the laws, rules and regulations – continued over the years, with only minor modifications. The modifications did not constitute re-engineering of a level that could enable the system to become an integrated component of modern and effective vehicle, road and traffic management system.

4.2.2 Such systems were adequate to manage relatively small vehicle populations. Today, such traditional systems, whether automated or manual, are therefore inherently limited for managing large and fast growing vehicle populations. In Pakistan, the vehicle registration systems need to effectively manage vehicles residing and plying widely across Provincial boundaries. **There is a need to manage a variety of transactions (most frequently transfers of ownership, payment of fees and taxes) regardless of Province and District where the vehicle is registered.** Systems anchored on legacy laws, procedures and processes are inadequate, not only for the management and revenue collection functions of the E&TD, but to a much greater extent are incapable of serving the modern information and data needs of external stakeholders. Such external stakeholders are responsible for the changing paradigms and functions of traffic policing, on-the-spot checking, countering and tracking crime & terrorism, enhancing security and access control, managing urban and highway traffic, and enforcing taxation

policies. **These newer complexities of the current environment demand an integrated approach. The vehicle registration system is a key component of the integrated environment. It should be able to manage large and fast growing vehicle populations and to serve the wider requirements of stakeholders that need to depend on it.**

4.2.3 Another relevant aspect of legacy systems is that the “visible registration components”, i.e. the license, number plate and the registration documents, are ineffective in terms of the needs of a modernized environment. The vehicle number plate, which should have the status of an officially issued “document” of the Registration Authority, is unable to play its basic role for the policing function of on-the-spot verification of vehicle credentials. Even with standardized number plates having been introduced, the population of vehicles displaying plates of the owner’s choice of design, size and colour is large. Strict policing and enforcement is lacking and security is compromised further to that extent.

4.2.4 Without a move towards a system, that commences with re-registration of the existing vehicle population and simultaneous clean-up of the database by identifying vehicles of doubtful credentials, the E&TD and other stakeholders would be faced with a vehicle population, which will be increasingly unmanageable and non-traceable, whether from the viewpoint of revenue collection, security enhancement, or facilitating any of the other functions of stakeholders that need to rely on it.

### **4.3 Section III-A Status of Computerization of Vehicle Registration Systems undertaken by the Provinces**

4.3.1 It is pertinent to consider the overarching objectives of current computerization initiatives by the Provinces, Federal Islamabad Capital Territory and the Government of Azad Jammu & Kashmir, as these are relevant in the context of the integrated framework that Information & Communication Technologies (ICT) enable.

4.3.2 The overarching objectives are:

- To clean up and arrive at an accurate and reliable database of vehicle and ownership, through re-registration of the existing vehicle population.
  - To introduce an effective and sustainable system, which will continue to maintain an accurate and updated database of the vehicle and ownership, through IT-enabled and system managed capabilities handling all transactions, covering registration, licensing, re-registration, transfers, de-registration, cancellations, periodic fitness certification, penalty and ticketing management and inter-district and inter-regional movement/transfers.
  - To enable efficient revenue tracking and collection, including effective penalizing of road tax, motor tax and license defaults.
  - To equip the Policing and Checking Agencies with on-the-spot ease in verification of vehicle and driver credentials.
  - To accommodate design features and data capture which enable creation of the independent domains and sub-databases for dependent user groups and functions, including the Police, Transport Authorities, Customs & Taxation, Vehicle Fitness, Vehicle Penalty Ticketing, National & Provincial Highway Planning Authorities, Environmental Protection Agencies, etc.
- The components which have been introduced by different Provinces include:
  - An IT enabled system, consisting of software, hardware, networking and communication enabling Province wide connectivity with a Provincial headquarter, where all District data of vehicles is consolidated.
  - Standardized and international quality reflective number plates, 3rd number plates (windscreen sticker) and registration documents, containing forgery resistant, tamper proof security features which form the basis of reliable and fool-proof verification for stop-and-check functioning of the Traffic Police.
  - Provincial amendments and revisions of the Motor Vehicle Laws and Rules, updating the regulatory framework, so that it is possible to effectively address areas which have progressively become the source of misuse and weaknesses of the current systems. Examples of practices that corrupted and rendered ineffective the basic workings of the system are the “open transfer letter” culture, change of vehicle colour and credentials without obtaining

formal permission of the Registration Authority, etc.

- Developing a comprehensive set of revised business practices, Standard Operating Procedures and Regulatory Framework, to complement the IT enabled systems.
- Developing capacity through interactive training and re-training

of the existing Registration Authority Personnel, both in the use of IT-enabled systems and adoption of international best practices to suit local requirements and problems.

#### **4.4 Section - III - B. Status of Provincial Vehicle Registration Systems & Harmonization**

4.4.1 It is also relevant to consider to what extent the current vehicle registration systems of Provinces are capable of addressing the specific needs of data availability and access, monitoring, checking and enforcement, etc. Whether in the context of “Modernizing the Trucking Sector of Pakistan” or

indeed the wider objectives and requirements envisaged under the National Trade Corridor Improvement Programme (NTCIP).

4.4.2 The current status of computerization projects in the various Provinces is as under:

NWFP	23 Districts & HQ	* New System
Punjab	8 Districts & HQ	* New System
ICT - Islamabad	1 Central Office & HQ	* New System
AJ&K	5 Districts & HQ	* New System
Sindh	4 Regions & HQ	Old System
Balochistan	1 Distt	Legacy/Partial Systems
FANA	NIL	Manual Systems

*\* The new computerised systems in these Provinces / Territories have a common underlying design. Therefore, CDR can be readily implemented to receive and centrally share data both Inter-Provincially and with other Beneficiaries*

4.4.3 Details of the same are attached at **Annexure-II**

4.4.4 The new systems introduced by the Provinces, including varying changes in the Laws and Regulations introduced by the respective Provinces and Territories is the result of Provincial initiatives. It still lacks Federal coordination or intervention. The major reason for this lack of coordination

arises from the fact that the Provinces consider vehicle registration to be a Provincial subject and domain. The fact is that the vehicle registration is governed by Laws and Regulations essentially embodied in Federal laws, adopted and implemented (with amendments and changes) by the

Provinces. This important distinction between the Federal and Provincial domains has become progressively “grey” because the revenues are collected as Provincial fees and taxes. It will be necessary for the Federal role – without infringing on the Provincial domain – to be restored. For addressing the national needs of all Federal and Provincial stakeholders in an integrated environment, a harmonized system that serves the emerging national requirements in an integrated environment is necessary. This can be achieved without infringing on the Provincial domain but through an integration mechanism that restores the Federal role and also positions the Provincial systems to contribute to the wider national needs such as those of the NTCIP.

4.4.5 The main Federal role that remains lacking – regardless of the Provincial initiatives in modernizing their respective vehicle registration systems – is one of coordination and consolidation. **Coordination** between Provinces is necessary for certain inter-Provincial transactions and **Consolidation** is required because vehicle data residing in the Provincial systems is required in a consolidated form for national subjects such as those under the NTCIP.

4.4.6 In this context, it is relevant to highlight some of the Provincial and Inter-Provincial needs that are currently not met because of the absence of the Federal coordinating and consolidating role – despite the introduction of computerized systems by the Provinces.

4.4.7 **Examples of Inter-Provincial needs (Coordination) include:**

- i. Lack of Inter-Provincial reconciliation and settlement of Revenues.

- ii. Lack of system managing Inter-Provincial NOCs for Transfer of Ownerships, Change of Address, Payment of Taxes outside Province and District of original registration of vehicle.

4.4.8 While the motor vehicle laws contain provisions for the above transactions, the systems are incapable of facilitating implementation because of the absence of the coordinating function.

4.4.9 **Examples of National Needs (Consolidation) include:**

- i. Lack of capability to check for duplicity of vehicle credentials (engine and chassis numbers)
- ii. Lack of data access capability for stakeholders at national level, such as National Highways Authority (NHA), national policing & homeland security requirements, etc.

4.4.10 **Truck Data contained in Provincial Vehicle Registration**

In the specific context of “Modernizing the Trucking Industry” availability and access to essential truck data will be a pre-requisite for introducing a successful regime of monitoring, regulation and enforcement. Examples of data for such requirements are:

- i. For axle load checking and control, (weigh-bridges for static and in-motion load measurement are being introduced) a truck’s data and manufacturer’s recommended - and accordingly registered - unladen weight, laden weight, number of axles, number of wheels, tyre sizes, etc. is necessary.
- ii. For Tolling and E-Tolling as being currently considered and to be introduced for improved monitoring on the trade corridors,

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speedier access through weighbridge and toll points, similar

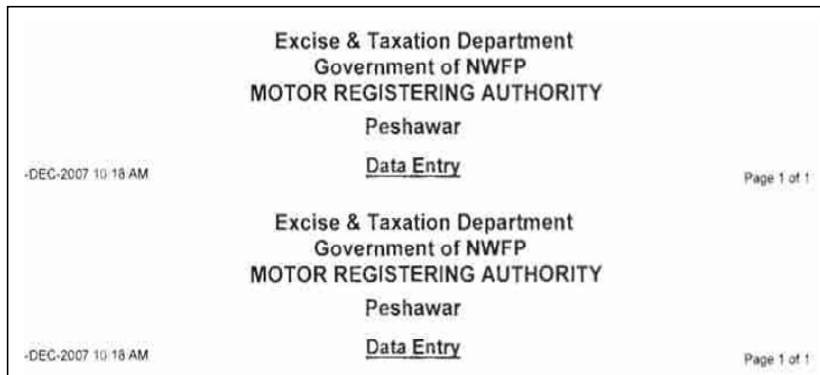
truck data is necessary, as above.

4.4.11 Trucks bearing older registration documents of the Provinces, whether relating to the period of manually managed or legacy computerized systems have failed to include such data at the time of first registration of the vehicle. Even Provinces that have introduced new systems recently (refer to Section III-B) have not made it mandatory for such data fields to be provided and entered in the registration system at the time of first registration of the vehicle.

AJ&K and Islamabad Capital Territory have been designed according to new and futuristic requirements and therefore contain data fields keeping in view the requirements of stakeholders such as NHA, EPA, Police, etc. The data fields available go far beyond the current legal and stakeholder requirements. Data fields for “standing noise level” and “moving noise level” of a truck are examples of data fields, available for managing noise pollution; a subject relating to environmental pollution which is yet to appear on the horizons of our priorities in Pakistan.

4.4.12 The Federal role, in emphasizing the importance of certain data fields as **mandatory for registration requires enforcement rather** than changes to the vehicle registration system itself. The fact is that the new computerization registration systems of the Provinces,

4.4.13 The system snap shots from the NWFP computerized vehicle registration system illustrate the available fields of data for trucks.



Owner Detail:				
CNIC	: 17301-1369884-3			
Owner Name	: NEK NAWAZ			
Father/Husband's Name	: AFZAL KHAN			
Current Address	: House No 206 Street 14 Ph 3-3 Hayat Abad Distt. Peshawar Pakistan			
Permanent Address	: House No 206 Street 14 Ph 3-3 Hayat Abad Distt. Peshawar Pakistan			
Vehicle Detail:				
Reg Date	: 1994			
Body Type	: DUMPER TRUCK			
Category	: COMMERCIAL			
Pur/Ver/Tax Date	: 06-03-2007			
Maker	: HINO			
Year of Model	: 1994			
Previous Reg No	: 1994			
Year of Manf	: 1994			
Engine No	: H07DA11343			
Engine Size	: 7412			
No of Cylinders	: 12000			
Laden Weight	: 12000			
Length	: 12000			
Towing Load Break	: 12000			
Standing Noise Lvl	: 12000			
Env Friendly Class	: 12000			
Reg No	: P 7000			
Usage	: Transport of Goods			
Vehicle Price	: 532,166			
Make	: HINO TRUCK			
Model Description	: HINO TRUCK			
Date of First Reg	: 06-MAR-07			
Seating Capacity	: 3			
Chassis No	: FD3HJA-51490			
Horse Power	: 7412			
Wheel Base	: 5600			
Unladen Weight	: 5600			
Width	: 5600			
Towing Load w/o Break	: 5600			
Driving Noise Level	: 5600			
Height	: 5600			
Purchase Info:				
Local/Imported	: Local Purchase			
Invoice No	: 2307/2007/1095			
Invoice Date	: 31-01-2007			
Sale Certificate No	: 31-01-2007			
Import Permit No	: 31-01-2007			
Pmt Place of Issue	: 31-01-2007			
Importer Name	: 31-01-2007			
Importer Address	: 31-01-2007			
Imported From	: 31-01-2007			
Remarks	: 31-01-2007			
Axle Info:				
Description	No. of Tyres	Weight	Tyres Description	Size
FRONT AXLE	2	3000	1100X20	R
REAR AXLE	4	9000	1100X20	R

I confirm that the above owner and vehicle details are correctly recorded.

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<b>Vehicle Detail</b>			
Classification	LTV	Body Type	Sedan
Engine Capacity	1500 CC	Horse Power	125 BPH
Seating Capacity	5 Persons	No. of Cylinders	4 Cylinders
Towing Load With Brake		Towing Load w/o Brake	
Un-Laden Weight	1200 Kg	Standing Noise Level	
Driving Noise Level			
Environment Friendly Class	A-1	Tank Size	60 Liters
Engine Type	Petrol	Fuel Type	Petrol

<b>Additional Particulars</b>			
Reg. Laden Weight	1200 Kg		
Wheel Base		Height of Vehicle	
Length of Vehicle		Width of Vehicle	

Description	Front	Middle	Rear	Other
No. of Axles				
Axle Weight				
No. of Tyres				
Size of Tyres				

The screenshot shows a software window titled "Data Entry Verification [DATA\_ENTRY\_VERIFICATION]". It features a "Vehicle General Info" tab with various input fields and buttons. The "Assigned Values" table lists "MANUFACTURING COLO" as "Blue". The right side of the form contains fields for engine capacity, seating capacity, manufacturing type, date of first registration, and other vehicle specifications. At the bottom, there are buttons for "Verify", "Disapprove...", "Reject...", "Reasons...", and "Close".

Assigned Values	
MANUFACTURING COLO	Blue

*Date of Purchase/Import	10-10-2006
*Value	434466
*Model	1991
*Maker	HINO
*Make	HINO TRUCK
Model Name	
*Model Description	
*Year of Manufacturing	
Registered Laden Weight	12000
Registered Unladen Weight	5600

*Engine Capacity/Size	7412
*Seating Capacity	3
Manufacturing Type	TRUCK
Date of First Reg.	14-10-2006
Prev. Registration Number	
No. of Cylinders	
Horse Power	
Wheel Base	
Height of Vehicle	
Length of Vehicle	
Width of Vehicle	
Towing Load with Break	
Towing Load without Break	
Standing Noise Level	
Driving Noise Level	
Environment Friendly Class	

*Data Entry Form with Vehicle Record( Manufacturing Type Laden & unladen weights)*



*Data Entry Form with Vehicle invoice info, Axle info & Tyre Descriptions*

The screenshot shows the 'Data Entry Verification [DATA\_ENTRY\_VERIFICATION]' window with the 'Vehicle Additional Info' tab selected. It contains several data entry sections:

- Axle Information:** A table with columns 'Description', 'Weight', and 'No. of Tyres'. It contains two rows: 'FRONT' with weight 3000 and 2 tyres, and 'MID' with weight 9000 and 4 tyres. 'Apply' and 'Delete' buttons are present.
- Tyre Information:** A table with columns 'Description' and 'Size'. It contains one row: '1100X20' with size 'R'. 'Apply' and 'Delete' buttons are present.
- Engine Information:** Fields for 'Type of Engine', 'Fuel Type', and 'Tank Size' with an 'Add' button. Below is an 'Assigned Values' table with 'Remove' and 'Apply' buttons.
- Auction Info:** Fields for 'Vehicle ID' (36421), 'District ID', 'Lot No', 'Batch No', 'Category No', 'Voucher No', and 'Voucher Date'. It also includes a dropdown for '\*Imported / Local Purchase' (set to 'Local Purchase') and fields for 'Invoice No' (1572/2006/14191) and 'Invoice Date' (10-10-2006). Other fields include 'Sale Certificate No', 'Sale Certificate Date', 'Import Index No', 'Import Permit No', 'Import Permit Date', 'Import Permit Place Issue', 'Imported From', and 'Company Name'.
- Importer Name** and **Importer Address** fields.
- Remarks** field.
- Buttons at the bottom: 'Verify', 'Disapprove...', 'Reject...', 'Reasons...', and 'Close'.

*Data Entry Form with Vehicle History Record*

The screenshot shows the 'Data Entry Verification [DATA\_ENTRY\_VERIFICATION]' window with the 'Vehicle History' tab selected. It contains several data entry sections:

- \*Vehicle History:** Fields for '\*Owner(s) Information', '\*Transactions', and '\*Date (dd-mon-yyyy)'. It includes an 'Add' button and an 'Assigned Values' table with entries for 'JABIR SHAH' and 'JHANZEB' with transaction 'Registration of Auction' on '14-oct-2006'. 'Remove' and 'Apply' buttons are present.
- \*First Tax Payment:** Fields for '\*First Tax Date', '\*Owner', and '\*Amount'.
- \*Previous Tax Payment:** Fields for '\*Prev. Tax Date', '\*Owner', '\*Amount', and '\*Paid Upto'. 'Apply' button is present.
- Ammendments:** Fields for '\*Owner', '\*Transactions', '\*Transaction Date', '\*Attribute', '\*Changing Date', '\*Prev. Value', and '\*New Value'. It includes an 'Add' button and an 'Assigned Values' table. 'Remove' and 'Apply' buttons are present.
- Buttons at the bottom: 'Verify', 'Disapprove...', 'Reject...', 'Reasons...', and 'Close'.

Receive Application Form of Re-Registration Process

4.4.14 Availability and Enforcement of Mandatory Truck Data

Many of the data fields provided for vehicle data (number of axles, size of wheels, size of tyres, etc.) are left unpopulated (blank) because the necessary data is not available in the source purchase or import documents provided to the vehicle purchaser. The Provinces need to make such data fields mandatory for registration. More importantly, the Federal coordinating and consolidating role – as suggested –

needs to come into play to achieve harmonisation in implementation by the Provinces. The Federal role extends to promulgating and enforcing (on vehicle importers, local manufacturers, assemblers) that source documents provided to the vehicle importer or purchaser contain the required standard data fields. Provinces cannot be expected to effectively enforce the availability of such data fields, without the Federal role.

**4.5 Section – IV Recommendations and Policy Interventions**

4.5.1 For the Provincial Vehicle Registration Systems to become positioned for an effective role in the context of modernization of trucking industry and in the wider national framework, the following actions and policy decisions are recommended:

- i) The Provinces that have not yet taken up computerization of vehicle registration systems or are operating outdated and legacy based computerised systems should migrate to the same systems as implemented by Punjab, NWFP,

- ICT and AJ&K. This will ensure harmonization of systems and data fields, necessary, on the one hand, for improved Inter-Provincial systems, functions and coordination and on the other hand, for enabling central data consolidation, required for national needs such as the NH&MP, security, policing and other Federal requirements, such as improved documentation, etc.
- ii) The data fields of trucks required by other stakeholders and for national programmes such as NH&MP, are made mandatory, with relevant Ministries of the Federal Government playing the role for promulgation and enforcement on providers of such data (Importers, Manufacturers, Assemblers, etc.).
  - iii) The relevant Ministries of the Federal Government need to interact with the Provincial Governments - through an existing committee or forum already in place for coordinating the subject of the NH&MP - for a coordinated plan of action to complete implementation of Provincial Vehicle Registration Systems, achieve harmonisation of vehicle data fields required for National and Federal requirements, and ensure enforcement of vehicle registration and documentation requirements (including display of number plates issued by the E&TD of the Provincial Governments).
  - iv) The Provincial Governments need to be engaged by the relevant committees or Ministries, on the subject of increased relevance and importance of harmonized vehicle data and regular electronic transfer of such data that will be required for enabling availability of consolidated data at national level. The Federal
- role of coordinating and consolidation - that would augment Provincial functions and improve inter-provincial processes and transactions needs to be clearly defined and emphasized to the Provincial Governments.
- v) A review of the main Motor Vehicle Laws, Ordinances and Rules needs to be taken up at the Federal level. In conjunction with the Provincial amendments and changes, it needs to be assessed and evaluated to what extent the overall Federal and Provincial Laws and Regulations provide the business and regulatory environment for a modernized trucking industry. Federal amendments, for Provincial adaptation and implementation need to be finalized while also reviewing and recognizing that some of the Provinces have made amendments that provide the current best practices and benchmarks for the other harmonized implementation by all Provinces.
  - vi) That the gaps and variations that have widened over the years in the Laws and Regulations through vehicle registration systems (rather than revenues) becoming increasingly treated as a Provincial subject are narrowed and harmonized. The distinction between the basic laws and regulations (as a Federal subject) and implementation and revenues (as a Provincial subject) needs to be clearly defined and re-emphasized, to enable harmonization of basic systems and processes between the different Provinces and Territories.