

Environmental Fiscal Reform to promote green economy in countries in transition

Progress on sustainable development and poverty eradication in Vietnam

Bachelor Thesis

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Zusammenfassung

Eine Ökologische Fiskalreform (ÖFR) verleiht Umweltgütern einen monetären Wert, indem Marktpreise durch Besteuerung, Kostendeckung und Subventionsabbau den gesamtgesellschaftlichen Kosten angenähert werden. Die vorliegende Arbeit untersucht spezielle Vorteile und Herausforderungen einer ÖFR für Schwellenländer im Hinblick auf nachhaltige Entwicklung und Armutsbekämpfung. Eine Fallstudie über Vietnam liefert Erkenntnisse aus der praktischen Umsetzung. Die Forschungsergebnisse zeigen, dass eine ÖFR gleiche wirtschaftliche Rahmenbedingungen und Anreize für nachhaltige Produktions- und Verbrauchsmuster schaffen kann. In Vietnam müssen trotz der umfassenden Rechtsgrundlage für Umweltsteuern die spezifischen Steuersätze erhöht werden, um signifikante ökologische und soziale Vorteile zu erwirken. Des Weiteren bestehen noch große Herausforderungen bezüglich des Abbaus umweltschädlicher Subventionen im Energiesektor. Trotz des logisch fundierten Konzepts der ÖFR wurde die umfassende Umsetzung ihrer Prinzipien durch politische Hemmnisse, wirtschaftliche Interessen und strukturelle Defizite während des Übergangs zur Marktwirtschaft erschwert.

Schlagnorte: Ökologische Fiskalreform, green economy, Schwellenländer, nachhaltige Entwicklung, Armutsbekämpfung

Summary

Environmental Fiscal Reform (EFR) translates environmental assets into economic incentives, by means of taxation, cost recovery and subsidy reform. This paper chooses a comprehensive perspective to explore particular benefits and challenges of EFR for transition economies in pursuit of sustainable development and poverty eradication. A case study on Vietnam gives insights into lessons learned from practical implementation. The results show that EFR can provide equivalent economic framework conditions and market-based incentives for sustainable production and consumption patterns. In Vietnam, despite the comprehensive legislation on environmental taxation, the specific tax rates will need to be raised in order to deliver significant social and environmental gains. Furthermore, Environmentally Harmful Subsidies in the energy sector remain a major challenge to be addressed. In spite of the well-developed rationale behind EFR, political barriers, economic interests and structural difficulties during the transition process hampered the comprehensive implementation of EFR principles.

Keywords: Environmental Fiscal Reform, green economy, countries in transition, sustainable development, poverty eradication

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ABBREVIATIONS

AAGR	Average annual growth rate
ASEAN	Association of Southeast Asian Nations (ten member states including Vietnam)
BAU	Business as usual
CIT	Countries in transition
EC	European Commission
EEA	European Environment Agency
EFR	Environmental Fiscal Reform
EHS	Environmentally Harmful Subsidies
EPT	Environmental Protection Tax
ETR	Environmental Tax Reform
ETV	European Technical Assistance Programme for Vietnam
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation; former GTZ)
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation; GIZ since 2011)
IMF	International Monetary Fund
kWh	Kilowatt hour
NAV	National Assembly of Vietnam
SCNAV	Standing Committee of the National Assembly of Vietnam
SOE	State owned enterprise
OECD	Organisation for Economic Co-operation and Development
R&D	Research and Development
UNO	United Nations Organisation
UNCSD	United Nations Conference on Sustainable Development
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme
USD	US-Dollar
VAT	Value added tax
VND	Vietnamese Dong (per 28 May 2013: 1 VND = 0.00003 €; 1 € = 26,760 VND)
WB	World Bank

1. INTRODUCTION

At the United Nations Conference on Sustainable Development in 2012, often referred to as “Rio+20”, Member States endorsed an outcome document focussing on the two main negotiation themes, i.e. green economy in the context of sustainable development and poverty eradication, as well as an institutional framework for sustainable development. “The Future We Want” recognises green economy as an important tool for sustainable development (UNCSD, 2012) as it has the potential to improve human well-being and social equity while significantly reducing environmental risks and ecological scarcities (UNEP, 2010).

The multiple crises that have affected our environmental, social and financial system during the last decades give rise to criticism concerning the prevailing economic paradigm, market conditions and policies. Since businesses remain largely unaccounted for social and environmental externalities, these framework conditions contribute to capital misallocation, resource depletion, environmental degradation and social disparity (UNEP, 2011).

Conversely, the green economy concept offers a development path that promotes more efficient consumption and production patterns, innovation, jobs, environmental improvement and poverty alleviation (UNEP, 2011). However, shifting investment towards clean technology, research and development (R&D), human resources and natural capital requires favourable framework conditions that reward full liability of businesses. Governments hence need to set up a level playing field for private investment directed towards sustainable economic activity. This includes implementing legal regulations, pricing incentives, adequate infrastructure and information in order to integrate environmental and social concerns in every day and strategic decision making processes.

This paper focuses on environmental fiscal policies defined as “taxation and pricing measures which can raise fiscal revenues while furthering environmental goals” (OECD, 2005, 24). Although market-based instruments can never be implemented standing alone, i.e. independently of other policy measures mentioned above, they proved to be crucial for enabling and promoting transition towards a green economy.

Against this background, the present paper intends to explore the role and potential of environmental fiscal policies in simultaneously progressing towards the goals of sustainable development and poverty eradication in countries in transition (CIT). It addresses three main questions:

- What are the differences between environmental taxes, subsidy reform, Environmental Tax Reform (ETR) and Environmental Fiscal Reform (EFR) and which benefits do they potentially yield?
- Why and in which way are environmental taxes and the concept of Environmental Fiscal Reform particularly favourable for countries in transition?
- Which opportunities, challenges and chances arise from practical implementation of an Environmental Fiscal Reform, evaluating the case study on Vietnam?

Several organisations and institutions such as the European Environment Agency (EEA), the German Agency for International Cooperation (GIZ, former GTZ), the Organisation for Economic Co-operation and Development (OECD) and the United Nations Organisation (UNO) provide a profound literature basis on Environmental Fiscal Reform in theory and practice. However, most of the studies conducted so far concentrate either on cross-sectoral reform efforts in industrialised countries or on sectoral approaches in developing and emerging economies. As a third type, there are reports focussing on one specific part of EFR,

i.e. environmental taxation or subsidy reform. However, there seems to be little evaluation of a comprehensive EFR for CIT, referring to both applied instruments and involved sectors.

The objective of this paper is to assess the effects and prospects of EFR in Vietnam where environmental taxes entered into force in 2012. By providing lessons learned, the case study helps to develop corresponding policy options for CIT in general. Furthermore, it aims to identify potential for improvement in terms of better environmental, economic and social effects, especially in the fields of environmental taxation and subsidy reform.

2. MATERIAL AND METHODS

The present paper is based on an in-depth research and evaluation of relevant scientific literature on green economy, environmental taxation, ETR, EFR and their role for sustainable development and poverty alleviation. In order to integrate practical experiences and lessons learned, it also considers assessments of country case studies (particularly on Vietnam) and outcome documents of different workshops on EFR for countries in transition. Technical and economic data from two ex-ante impact assessments and legal documents of the National Assembly of Vietnam provided the basis for the paper's case study.

The research was guided by personal recommendations of experts in the field of EFR, the snowball principle and a thematic search in international library catalogues.

This approach is supplemented by a written expert interview offering insights into the latest experiences with environmental taxation in Vietnam. Based on current data, Nguyen Thi Thu Ha from GIZ Vietnam was asked to personally assess the effects and the success of Vietnam's environmental taxes one year after their implementation.

3. RESULTS

The next three sections present research findings on three different stages, following a process of deduction from theory to practical implementation. The first chapter explores environmental fiscal policy and its potential benefits, the second one concentrates on its role for countries in transition and finally, a case study on Vietnam provides insights into practical deployment.

3.1. Environmental taxes, Environmental Tax Reform and Environmental Fiscal Reform – implications and potential benefits

Prior to assessing potential benefits of fiscal policy, it is important to clarify different instruments and concepts which belong to this type of market-based state interventions. Generally speaking, fiscal policy comprises measures of revenue collection (i.e. taxation) and revenue spending by the state. As it strongly influences market prices and disposable incomes, distributional effects need to be considered in the design phase (UNEP, 2012).

3.1.1. Definitions of environmental fiscal policy options

According to Eurostat (2001, 9), an environmental tax is defined as “a tax whose tax base is a physical unit (or a proxy of it) of something that has a proven specific negative impact on the environment”. Since this broad definition does not take into account the purpose of introducing a tax (e.g. environmental protection or revenue raising), it also includes so-called

“environmentally related taxes”. This term refers to taxes whose tax base shows a certain environmental relevance (OECD, 2001), but they are neither adequately designed nor primarily implemented for ecological reasons. Although they may play an important role for both state budgets and sustainability, environmentally related taxes do not occupy a central position in this paper, as their environmental effects are hard to determine and quantify.

Environmentally Harmful Subsidies (EHS) include “all kinds of financial support and regulations that are put in place to enhance the competitiveness of certain products, processes or regions, and that, together with the prevailing taxation jurisdiction, (unintentionally) discriminate against sound environmental practices” (OECD, 1998, 7). This definition considers direct subsidies as well as implicit support measures such as tax concessions, preferential access to resources or limited liability. EHS are often employed with the intention to ensure the affordability of basic commodities and services related to water, waste, electricity, heating and transport. However, as the artificially lowered price is mostly not tied to efficiency requirements, EHS create perverse incentives for high, wasteful consumption.

The European Environment Agency (EEA, 2005, 84) defines Environmental Tax Reform (ETR) as “a reform of the national tax system where there is a shift of the burden of taxation from conventional taxes, for example on labour, to environmentally damaging activities, such as resource use or pollution. The burden of taxes should fall more on 'bads' than 'goods' so that appropriate signals are given to consumers and producers and the tax burdens across the economy are better distributed from a sustainable development perspective”. In consideration of the revenue neutrality principle often associated with ETR, this approach is confined to shifting the burden of taxation and does not aim at increasing the national budget.

In comparison, Environmental Fiscal Reform (EFR) is a more complex concept that extends the mobilisations of funds from environmental taxation to other fiscal measures such as cost recovery schemes (fees and charges in return for services) and subsidy reform (a shift from EHS to green subsidies and investment). Concerning the expenditure side, EFR revenues and freed up funds allow for higher flexibility because they add to the general budget. For instance, they can be directly addressed to policies fostering sustainable development and poverty eradication. As CIT mostly face both environmental problems and a lack of financial resources for investment in social infrastructure (e.g. education, health sector, public transport), “EFR is an important part of the development policy tool kit” (OECD, 2005, 12).

There are several examples of CIT which have already introduced measures associated with EFR: South Africa levies taxes on non-renewable energy and vehicle emissions whilst providing tax exemptions to support CO₂ mitigation and research; Barbados redirects revenues from environmental taxation to address social concerns and support renewable energy; Indonesia removed parts of its fossil fuel subsidies to finance poverty alleviation (UNEP, 2012). However, as mentioned before regarding existing literature, most reform projects focus either on certain instruments or on certain sectors. As a result, there has not yet been a comprehensive implementation of EFR in any country in transition.

For different reasons stated above, it can be argued that ETR is a special type of EFR (SCHLEGELMILCH et al., 2010) that allows for a narrower scope in terms of revenue raising and spending. Aiming at a tax shift, ETR obtains fiscal gains only from broader, higher or more consequent taxation and earmarks them for specific areas where the tax burden shall be reduced in a budgetary neutral way. If the revenues are used to reduce other taxes that are more detrimental to economic growth (i.e. GDP) and employment (such as taxes on labour and corporate income), ETR offers a so-called “double dividend”, referring to simultaneous environmental and economic benefits (OECD, 2010). However, the level of taxation is still generally low in countries in transition, which is reflected in a low tax-to-GDP ratio between 10 and 15%. For this reason, ETR plays a more important role for economic efficiency gains

in developed countries, where tax revenues amount for around 40% of GDP (SCHLEGELMILCH et al., 2010). In this context, Germany’s tax shift from labour to polluting and energy intensive activities in 1999 serves as a valuable example.

3.1.2. Instruments and potential benefits of EFR in the context of green economy goals

Figure 1 provides an overview of the main fiscal instruments that constitute an EFR, their effects and potential macro-economic benefits¹. By the use of market-based measures, EFR contributes to adjusting the prices of goods and services towards the true costs they cause for society. This includes not only full private costs but also externalities, predominantly perceived as negative environmental and social impacts. The potential multiple dividends of EFR deploy in terms of improved environmental management, sound economic framework conditions, social welfare and resource mobilisation.

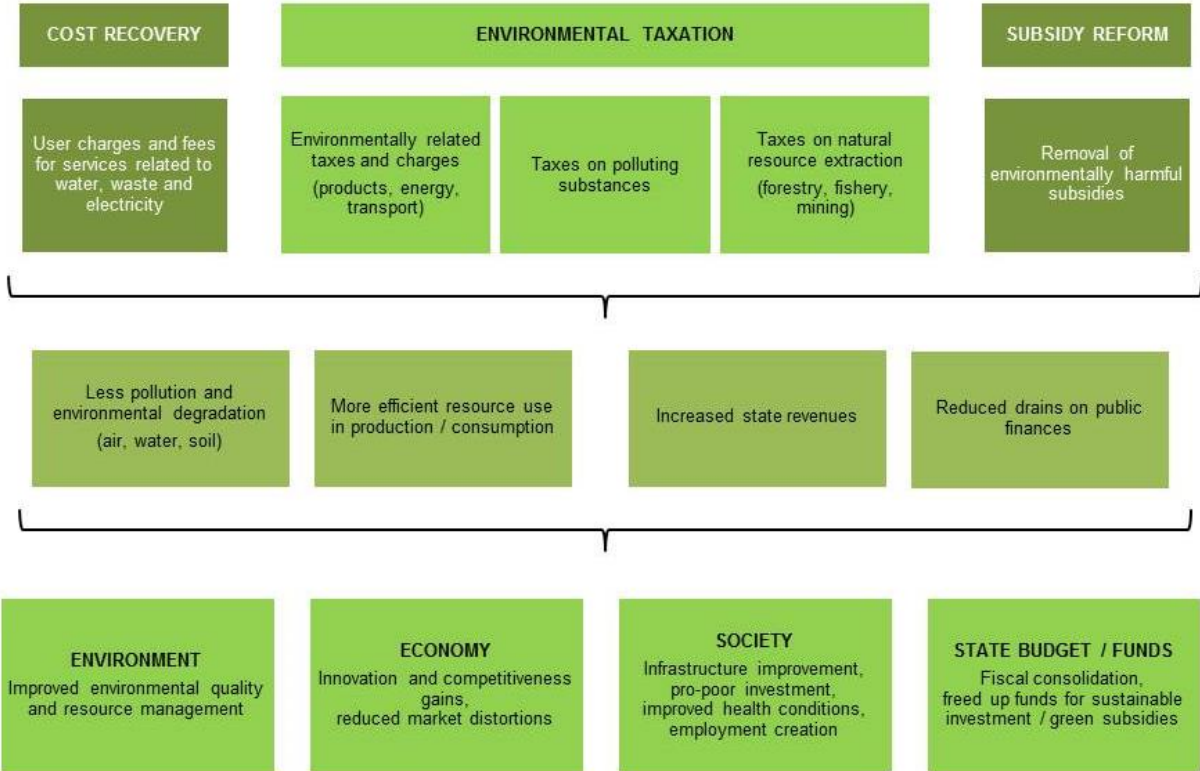


Figure 1: Implications of Environmental Fiscal Reform (own compilation)

Since EFR instruments introduce and strengthen price signals for resources, public goods and provisioned services, they translate their implicit values into market incentives that motivate economic actors to consider them in their production and consumption decisions. Additionally, explicit costs are reflected in strategic planning and may therefore trigger green investment, research and innovation. In the long run, these conditions are crucial for sustainable development that aims at preserving the current economic opportunities and level of economic welfare for future generations (UNEP, 2011). Compared to regulatory or administrative state interventions, market-based instruments can be designed and

¹ Please note that Figure 1 is supposed to provide an overview of characteristic and prevalently applied instruments in the context of EFR. They should not be seen as a precondition and can be replaced or complemented by other fiscal measures such as trading schemes.

implemented to correct market-failures such as fully lacking or insufficient price signals in a cost-effective manner (EUROPEAN COMMISSION, 2007).

Although a green economy and its fiscal framework conditions cannot automatically address all poverty issues, they provide certain win-win effects that especially benefit the poor. Firstly, EFR aims at the sustainable management of ecosystem goods and services (e.g. food, water, air purification or nutrient cycling) which form the basis for the livelihoods of the poor population. Secondly, by incentivising low-carbon investment, EFR has the potential to boost employment. As a third and indirect gain, additional revenues and freed up funds can be directed towards pro-poor investment (OECD, 2005; UNEP, 2011).

3.2. Environmental Fiscal Reform for countries in transition

As the previous section has shown, EFR has the potential to yield dividends in four different areas. Although they are not confined to a certain type of economy or development stage, there is reasonable evidence why CIT may particularly benefit from EFR. However, there are also significant challenges, trade-offs and concerns to be taken into account at the design stage.

3.2.1. Particular benefits of EFR for countries in transition

CIT are characterised by a transition process towards a market economy which is closely linked to privatisation, economic liberalisation, the evolution of a financial sector and institutional reforms reflecting the new role of the state. In a market economy, taxation has a twofold key role to play for the state: Whilst a well-designed tax system offers a level playing field for economic actors and may steer their behaviour, it also constitutes the main source of state revenues (RODI et al., 2012). Consequently, early EFR measures support economic transition and help to rationalise the fiscal system by removing EHS and replacing distorting taxes², mainly on imports, exports and corporate income (OECD, 2005).

Many countries in transition experience rapid economic growth at the expense of natural capital stocks and social equity. This is mainly due to poorly developed environmental and social legislation as well as to a lack of financial resources. On the one hand, EFR can be designed to internalise externalities according to the polluter-pays principle and to incentivise resource efficiency at lowest cost. On the other hand, it may generate and free up urgently needed funds for investment in education, health or infrastructure essential for the poor population, such as water supply, sanitation and access to energy. As the poor are disproportionately affected by environmental damage, there are also direct benefits from environmental protection (OECD, 2005).

In the context of sustainable development and poverty eradication in CIT, EFR instruments show significant advantages compared to regulations which are often combined with subsidisation of basic goods and services. This approach does not only fail to provide incentives for efficiency gains at all stages of pollution mitigation, but it is also difficult to administer and involves high costs for compliance and controls. Conversely, EFR can cover its own administration costs and improve monitoring, enforcement and cost-effectiveness of environmental policy (OECD and GTZ, 2004; OECD, 2005).

² Economic distortion resulting from taxation is considered as negative, if relative prices of products and services are changed in a way that does not help to reflect true costs. General taxes levied on income or trade do not take into account specific social or environmental effects, but primarily aim at raising funds for the state budget. Therefore, they are detrimental to economic growth without having a desired steering effect.

3.2.2. Trade-offs, design challenges and concerns related to EFR for CIT

When discussing the multiple win-win-effects of EFR, it is important to take notice of trade-offs between different policy objectives. The most substantial conflict in terms of taxation exists between environmental and fiscal effectiveness because a successful tax from an ecological point of view will quickly erode its own tax base. On the contrary, taxes that yield the highest state revenues are levied on relatively inelastic demand (i.e. demand that is non-responsive to a price increase) and do not allow for significant environmental improvement. The balance of the two effects largely depends on the tax level and the availability of alternatives for substitution (OECD, 2005). In comparison, the removal of EHS delivers a clear environmental and fiscal win-win situation.

The major challenge of EFR lies in a well-balanced design that considers the economic rationale behind environmental taxation and subsidy reform as well as country specific conditions and policy objectives. “This implies that there is no ‘one fits all’ approach” (SCHLEGELMILCH et al., 2010, 11). Furthermore, political and administrative feasibility as well as aspects of competitiveness and equity will shape the final design.

An ideal pigouvian tax equals the marginal environmental damage and should be targeted as directly as possible to the pollutant or the polluting activity in order to avoid efficiency losses. However, in many cases this principle runs contrary to administrative feasibility because levying taxes downstream in the supply chain implies that a lot of (small-scale) emitters need to be monitored. For this reason, it might be easier and even more effective to collect tax revenues upstream based on a close proxy, e.g. vehicle fuel instead of emissions (HEINE et al., 2012; OECD, 2010).

Political feasibility is often closely linked to competitiveness and distributional concerns which give rise to opposition against EFR. In CIT, the focus of EFR on poverty alleviation can help to increase acceptability in society, particularly if criticism refers to the potential regressivity of environmental taxes. This term characterises taxes that disproportionately affect poorer layers of society facing higher effective tax rates (measured against personal income). According to workshop findings (OECD and GTZ, 2004, 10), “it is likely that the poverty reduction potential of EFR outweighs any potential regressive effects it may have”. In order to prepare adequate compensation measures, a detailed analysis of positive and negative effects on different social groups is indispensable. In principle, distributive concerns should be addressed by policy responses outside the environmental tax system to avoid undermining its purpose (OECD, 2010). So called “ex-post tools” do not provide exemptions regarding EFR but special public support measures such as financial transfers (SCHLEGELMILCH et al., 2010).

Since taxes aim at burdening environmentally detrimental behaviour, it is part of their intention to particularly impact on polluters. However, as taxation is mostly subject to national policy, businesses at international level face different conditions altering competitiveness. As stated above for distributional concerns, the overall impacts of EFR on competitiveness have to be carefully analysed prior to designing relief schemes. Reductions and exemptions again risk to undermine the objectives of EFR (OECD, 2010). A measure that is often mentioned in the context of strongly affected industries is “revenue recycling”, which refers to channelling back resources within a sector in a revenue-neutral way to facilitate adjustment. Revenue recycling can be very successful in terms of increasing industries’ acceptability of EFR. Nevertheless, it needs strict requirements for improvement, cost-benefit assessments and a time limit in order to avoid long term subsidisation of polluters. If additional funds are used to reduce other distorting taxes within the same sector, environmental taxation and revenue recycling may create a double dividend.

As the experiences from many different case studies analysed in a joint workshop of UNEP, IMF and GIZ prove, transparency and early communication play a key role for building trust and acceptance (UNEP, 2012). Furthermore, a gradual, predictable increase in taxes and phase-out of Environmentally Harmful Subsidies allows consumers and producers to adapt. These principles were identified as key lessons learned from projects in countries including Barbados, Germany, Indonesia, Mexico, Nigeria, South Africa and Vietnam.

A final design component that often causes controversy is the question of how the revenues raised or freed up in the course of EFR shall be allocated. In contrast to ETR, there are several options that range from (1) allocating them to the general state budget for all sorts of expenditure or fiscal consolidation; (2) earmarking them for a predefined objective such as environmental or social investment; (3) compensating especially burdened groups to facilitate transition; to (4) reducing other taxes. Although channelling revenues to the state budget might not be the most popular alternative, the non-affectation principle requires that all expenditures remain independent in order to avoid under- or over-funding in preferential policy areas due to fluctuating revenues (GTZ, 2010c; OECD, 2010). When it comes to practical implementation, this argument needs to be balanced against other aspects such as public acceptability, political calculation, economic efficiency and additional environmental or social benefits (“double dividend”³).

3.3. Practical implementation in Vietnam – opportunities, challenges and chances

The Socialist Republic of Vietnam implemented an environmental tax law (NAV, 2010) that came into effect by 2012. Although the tax project was not embedded in a fully comprehensive reform including other fiscal instruments, this first step can be interpreted as an approach towards EFR. As a country in transition facing many typical challenges mentioned in the previous section, Vietnam may serve as a valuable case study for environmental fiscal policy in CIT. The following chapters will provide insights into framework conditions, policy design and practical implementation of environmental taxes in Vietnam. Furthermore, it identifies potential for improvement concerning cost recovery schemes and Environmentally Harmful Subsidies in the energy sector.

3.3.1. General framework conditions in Vietnam

With an average GDP growth rate of 7.3% during the last decade (GIZ, 2011), Vietnam was the second-fastest growing economy in Asia. Although environmental legislation has been in place since a long time, the continuous economic success could not be decoupled from environmental damage. Furthermore, Vietnam faces several macro-economic uncertainties such as high inflation rates, a trade deficit and sovereign debt. During the last years, the budget deficit fluctuated around 7% of GDP. Compared to other middle income countries, Vietnam’s economy is carbon intensive and energy inefficient, leading to a rising import dependency in the energy sector (UNDP, 2012). Against this background, the Vietnamese Prime Minister’s call for environmental taxation was reflected in the Law on Environmental Protection of 2005 (NAV, 2005). Two years later, the aim of adopting a legal basis for environmental taxation was integrated in the National Assembly’s legislative programme, which served as a driver for the following reform process (RODI et al., 2012).

When it comes to policy design and governance, CIT often face a lack of data, specific expertise, coordination and funds in the interdisciplinary field of EFR. In this context,

³ Taking a broad view of the “double dividend” concept, any benefit of EFR that adds to the environmental improvement resulting directly from pricing measures can be interpreted as a second dividend.

capacity development and financial contributions from international donors can be essential to provide assistance whilst strengthening existing structures and maintaining a sense of “ownership” (COTTRELL et al., 2008). In Vietnam, the European Commission supported the design and implementation process within the scope of its Technical Assistance Programme for Vietnam (ETV2). In the follow-up project commissioned by the German Federal Ministry for Economic Cooperation and Development, the GTZ provided expert advice, organised study tours and conducted an impact assessment in order to achieve an environmental tax law based on international best practice. In November 2010, the National Assembly of Vietnam (NAV) finally passed the “Environmental Protection Tax Law” with a large majority of the votes (GIZ, 2011).

Opinion polling and stakeholder engagement confirmed that the reform process was broadly supported by the public. However, the influence of civil society and public opinion should not be neglected, especially in the field of transport, where the motorcycle has become a symbol for personal freedom, convenience and prosperity in the absence of a dense network of public transport. Besides increasing energy prices, strongly burdening sectors such as farming and fisheries faced opposition from different groups (RODI et al., 2012; SIDEL, 2008).

3.3.2. Levies with environmental relevance and cost recovery in Vietnam

Prior to the new tax package, Vietnam had already enacted various levies with environmental relevance. These fiscal measures include land use and natural resource taxes as well as fees and charges on environmentally relevant activities such as waste water discharge, mineral exploitation or petrol refining. However, they lack a coherent legal basis and in most cases, ecological benefits arise as unintentional side effects. While many of the levies succeed in yielding urgently needed state revenue and raising general awareness for environmental concerns, their effectiveness to steer individual behaviour remains relatively low. This is mainly due to the fragmented legal base, low rates, levy-free tolerance ranges and insufficient monitoring and enforcement activities. Ideally, the rates should at least cover mitigation and service costs such as treatment and disposal efforts provided by state institutions (MEHLING, 2008).

3.3.3. Design of Vietnam’s Environmental Protection Tax

The Vietnamese Environmental Protection Tax (EPT) is an indirect tax levied on goods and products related to negative environmental impacts from production, processing, storage and use. The amount of taxable goods covers domestic production and consumption as well as imports and exports. Although direct pollution charges have evident advantages from an environmental and economic perspective⁴, they are often not compatible with the limited administrative capacities of CIT, which is also applicable to Vietnam. Vietnam’s Ministry of Finance set out to cover all types of energy consumption and as Table 1 shows, energy products form the core basis for taxation. Furthermore, plastic bags and environmentally harmful chemicals are included as taxable objects (NAV, 2010; RODI et al., 2012).

The main objective of the EPT is to enhance public awareness of environmental protection, thereby lowering the consumption of fossil fuels and improving environmental quality. In accordance with international standards, the tax is based on consumed physical units that cause environmental damage. Despite the high inflation rates in Vietnam, the nominal specific tax rates have not yet been indexed to inflation. Therefore, the real tariffs will decrease continuously and thus erode the fiscal incentive (GTZ, 2010b; HA, 2013).

⁴ See chapter 3.2.2.

Table 1: Environmental taxes in Vietnam from 01 January 2012; own compilation (based on NAV, 2010; RODI et al., 2012; SCNAV, 2011)

	Taxable object	Unit	Tax rate range (VND/unit)	Tax rate 2012/13 (VND/unit)
1.	Gasoline, oil, grease			
1.1.	Gasoline (except ethanol)	litre	1,000-4,000	1,000
1.2	Jet fuel	litre	1,000-3,000	1,000
1.3	Diesel	litre	500-2,000	500
1.4	Paraffin	litre	300-2,000	300
1.5	Mazut	litre	300-2,000	300
1.6	Lubricating oil	litre	300-2,000	300
1.7	Grease	kg	300-2,000	300
2.	Coal			
2.1	Lignite	ton	10,000-30,000	10,000
2.2	Anthracite coal	ton	20,000-50,000	20,000
2.3	Fat coal	ton	10,000-30,000	10,000
2.4	Other types of coal	ton	10,000-30,000	10,000
3.	Hydrochlorofluorocarbons (HCFC)	kg	1,000-5,000	4,000
4.	Taxable soft plastic bags	kg	30,000-50,000	40,000
5.	Herbicides restricted in use	kg	500-2,000	500
6.	Pesticides restricted in use	kg	1,000-3,000	1,000
7.	Forest product preservatives restricted in use	kg	1,000-3,000	1,000
8.	Warehouse disinfectants restricted in use	kg	1,000-3,000	1,000

As part of the Environmental Protection Tax Law, the National Assembly determined ranges within which the NAV's Standing Committee (NASCV) can set specific tariffs. The ample scope shall ensure that in each period, the tax rates can be aligned with socio-economic development policy and inflation. As a general principle, the EPT shall reflect the environmental damage caused by the covered goods. Additionally, other fees and charges as well as the affordability for tax payers were taken into account. The Standing Committee specifies the rates every two or three years based on a proposal by the Ministry of Finance, which strives for a steady and predictable tax increase. As Table 1 indicates, the tax rates effective from 2012 are rarely above the statutory minimum. This is mainly justified by affordability concerns related to the currently high oil prices on the world market (HA, 2013; NAV, 2010; RODI et al., 2012).

The question of revenue allocation appeared to be more controversial than expected in Vietnam. Although the initial legislation of 2005 that provided the mandate for environmental taxation clearly earmarked the additional funds for environmental protection, this was abolished by a final decision in 2011. On the one hand, there was a broad consensus on the advantages of the "double dividend", but on the other hand, the process of practical implementation revealed many constraints such as public acceptability (e.g. lower taxes in critical sectors instead of a high burden combined with relief measures) or structural and technical barriers (e.g. the lack of a well-functioning social security system or of sufficient alternatives to individual traffic). Even though politicians agreed to use the revenues for environmental protection, the final vote of the National Assembly determined the allocation to the general budget (RODI et al., 2012).

3.3.4. Expected impacts of environmental taxation

Since Vietnamese legislation requires an impact assessment prior to the implementation of a new law, the GIZ commissioned a study on the socio-economic and environmental effects of the draft EPT Law in 2010 (GIZ, 2011). Based on a Computable General Equilibrium, Dirk Willenbockel (2010) modelled the impacts of a low and a high tax scenario on producer and user prices, sectoral output and employment, the commodity structure of demand, government

tax revenue, CO₂ emissions and household welfare. The model allows both substitution between different energy sources as well as technology switches towards more energy-efficient production modes. Table 2 provides an overview of selected effects⁵.

As Table 2 shows, the taxes on refined fuels and coal generate around 99% of the estimated revenues and thus represent the central parameters for the ex-ante impact assessment. Although the other taxes have important incentive effects and will possibly lead to full substitution of the taxable objects, their macro-economic impacts are negligible. In the case of coal, the tax scenarios equal the lower and the upper limit of the legally determined tax range. For refined fuels, however, the study considers the fact that existing fees or surcharges on the use of gasoline and diesel will be abolished by the introduction of environmental taxes. Hence, the calculated impacts are based on the net increase of tax rates, i.e. the difference between the environmental tax rate and the former fees of 1,000 VND/litre gasoline and 500 VND/litre diesel (WILLENBOCKEL, 2010).

Table 2: Selected effects of environmental taxation in Vietnam; own compilation (based on WILLENBOCKEL, 2010)

Impact categories	Low tax scenario	High tax scenario
Real macro-economic aggregates (% deviations from baseline growth path)		
Absorption (H+G+I)	0.0	-0.2
Household consumption (H)	-0.7	-2.
Government consumption (G)	0.3	1.0
Public and private investment (I)	0.9	3.6
Exports	-0.6	-1.6
Imports	-0.4	-1.2
Real exchange rate ⁶	-0.1	-0.6
Government revenue	1.9	7.3
Household welfare (Hicksian equivalent variation as % of base income)		
Average of all income groups and households	-0.66	-2.75
CO₂ emissions (% deviations from a projection for 2012)		
Total	-2.3	-7.5
Coal	-2.5	-10.2
Fuels	-3.8	-11.5
Natural gas	2.2	8.5
Environmental tax revenue per taxable category in 2012 (in billion VND; in 2007 prices)		
Total	9,657	37,844
Refined fuels (1.1 to 1.5 in Table 1)	8,967	35,158
Coal	571	2,488
HCFC	4	21
Chemicals	1	7
Taxable soft plastic bags	114	170

Dirk Willenbockel's ex-ante impact assessment provides a good data basis to evaluate the potential impacts of Vietnam's environmental tax law on macro-economic variables. Willenbockel (2010) identifies fuel taxes as the strongest instruments with economy-wide repercussions, if the rates are set at the higher end of the legal range. Tax-induced price increases would raise the production costs and output prices in fuel-intensive sectors such as fisheries, coal and transport. Consequently, rising transport costs would spread the impacts further across the economy. From a social point of view, the high tax scenario would shift a significant share of purchasing power from households to the Government, thus reducing household welfare. This means that households finally have to bear the burden of taxation,

⁵ Note that apart from the expected revenues in 2012, the figures do not represent a point forecast for any specific year, but a deviation from the baseline scenario without environmental taxation.

⁶ Negative deviation indicates real exchange rate appreciation.

especially if the Government fails to return the revenues adequately. In this context, it is important to note that the model did not consider future welfare gains due to beneficial environmental impacts. The environmental tax law has the potential to reduce CO₂ emissions between 2.3 and 7.5%, depending on the tax rate applied. Overall, the model suggests that the EPT has the potential to strongly influence Vietnam's economy.

Although these results of the ex-ante impact assessment may be interpreted as a sign of success, they also lead to the conclusion that the current environmental tax rates create little macro-economic effects. Since the 2012 fuel taxes equal the statutory minima, they exactly replace the abolished fees and thus fail to create any allocative effect. Unfortunately, there are no modelling data available for the impacts of the 2012 coal taxes of 10,000 and 20,000 VND/ton respectively. As the Standing Committee set almost all specific tax rates at the lower boundary, the results of the low tax scenario could be assumed to approximate the current effects. However, there are two reasons why the low tax scenario does not exactly correspond to the specific tax rates of 2012. In the case of coal, the bottom limit of 6,000 VND/ton foreseen by the draft law was raised to a minimum of 10,000 VND/ton in the final wording. For gasoline and diesel, the low rates applied in the net increase calculation (2,000 VND/litre and 1,000 VND/litre respectively) lie above the lower boundary to avoid a zero-sum game. These two divergences imply that in comparison with the current tax levels, the tax rate for coal in the impact assessment is too low whereas the tax rates for gasoline and diesel are too high. Nevertheless, taking into consideration that the scenarios generally lead to the same effects that solely differ in magnitude, the modelling results can still serve as an orientation framework.

Until mid-2013, the Ministry of Finance has not yet initiated an ex-post impact assessment on the effects of the EPT. Hence, it is difficult to quantify all environmental, social and economic outcomes of the law at the moment. According to Ha (2013), the revenues from environmental taxes in 2012 amounted 12,768 billion VND, thereby representing 0.45% of GDP. The estimated share of environmental taxes in total tax revenue (excluding import and export taxes) was 2.6%.

3.3.5. Environmentally Harmful Subsidies and fossil fuel fiscal policies in Vietnam

Fossil fuel subsidies subsume all government interventions that decrease the relative costs of fossil fuel supply and related products or services. Subsidies aim at affordable access to energy for households and industry but also have other, wide-ranging economic consequences. Whilst creating fiscal imbalances and sovereign deficit, this policy hampers on energy efficiency and technological innovation, discourages private investment and green growth. Furthermore, fossil fuel subsidies tend to be regressive because they mainly benefit higher-income households (IMF, 2013). The most common way to measure consumer and producer subsidies is often referred to as "price-gap approach". This method calculates the difference between the world market price and (1) the price paid by the consumer (consumer subsidy) or (2) the price received by the producer (producer subsidy). Globally, fossil fuel subsidies in the period 2007-2010 are estimated to have fluctuated between 300 and 560 billion USD (IEA, 2011).

In Vietnam, fossil fuel subsidies appear predominantly as indirect support measures in three sectors (KOJIMA, 2013; UNDP, 2012):

- In the power sector, prices are capped by the Government, which has led to continuous losses for state owned enterprises (SOEs). In 2010, the average electricity tariff of 1.400 VND/kWh was far below the average in the ASEAN region and was subsequently not even raised above inflation in 2011. In order to allow the sector to operate in a

financially sustainable way, electricity tariffs would have to be increased above inflation by 15-30%.

- Domestic coal prices are set below international prices to guarantee cheap electricity production and manufacturing.
- In the refined petroleum market, a price stabilisation fund shall keep the prices for products such as petrol and diesel within a predetermined range. Although it is supposed to be self-financing, outflows from the fund exceeded inflows from 2011 due to resurging world market prices. As a result, the fund accumulated a growing deficit and left SOEs with retail losses.

On the one hand, subsidies appear in the form of reduced tax rates and tax exemptions (e.g. reduced import taxes for petroleum and jet fuel). On the other hand, the Government ultimately has to bear the losses of SOEs by providing preferential access to financial and natural resources, a monopoly position in the energy market or investment in infrastructure and R&D (UNDP, 2012).

With the “price-gap approach”, the IEA (2011) estimated indirect consumption subsidies for fossil fuels in Vietnam. As Table 3 shows, they fluctuated between 1.2 and 3.6 billion USD in the period 2007-2010, reflecting the volatility in international fossil fuel prices. Due to market-based pricing and lower international price levels for oil in 2009 and 2010, the price ceiling was not reached and subsidies were zero. However, with global economic recovery, world market prices rose again in 2011 and 2012 (UNDP, 2012).

Table 3: Estimated consumption subsidies (in billion USD) in Vietnam between 2007 and 2010; own compilation (based on IEA, 2011)

Energy source	2007	2008	2009	2010
Oil	0.32	1.09	0	0
Gas	0.09	0.21	0.13	0.23
Coal	0.01	0.01	0.01	0.01
Electricity	1.68	2.25	1.06	2.69
Total	2.1	3.56	1.2	2.93

UNDP (2012) commissioned two model studies to assess the impacts of fossil fuel fiscal reform on growth, income distribution and GHG emissions. For this purpose, “business as usual” (BAU) was compared to two different scenarios, one with gradual phase-out of subsidies and one where fossil fuel taxes were introduced additionally. The models are based on the assumption that additional funds are either invested in low carbon activities, in the most productive businesses or in rebates and tax cuts for customers. Table 4 shows the impacts of subsidy removal and taxation on growth rates in key economic aggregates compared to BAU for the 2007-2020 period. According to the modelling results, both scenarios lead to slightly higher GDP growth and considerably higher gross investment rates. Growth in consumption, imports and exports are assumed to be lower than in the BAU scenario, reflecting higher domestic prices and rising domestic energy supply. The real exchange rate appreciates slightly due to a likely improvement in the account balance.

As a result of strengthened fiscal incentives, fossil fuel subsidy reform would change the economic structure of Vietnam. Most notably, growth would shift from energy intensive sectors such as fisheries and coal to low energy sectors including light manufacturing or textile. In accordance with the assumption that energy subsidies tend to be regressive, the model suggests that low income households see their consumption growth affected the least from subsidy removal. However, as they may feel small changes more than the better-off, compensation measures might still be necessary. From an environmental point of view, both

scenarios lead to reduced GHG emissions as consumption decreases in response to higher fossil fuel prices. Under the subsidy removal scenario, emissions might decline by over 9% against BAU by 2020. Additional fossil fuel taxes would even allow for a reduction of 13.5% by 2020 (UNDP, 2012).

Table 4: Impact of subsidy removal and taxation on average annual growth rates (AAGR) of real macro-economic aggregates 2007-2020 (%); own compilation (based on WILLENBOCKEL, 2011)

Impact categories	Subsidy removal	Subsidy removal & carbon tax
AAGR of real macro-economic aggregates (absolute changes from BAU)		
GDP	0.1	0.16
Consumption	-0.13	-0.29
Gross investment	0.48	0.79
Exports	-0.11	-0.29
Imports	-0.1	-0.26
Real exchange rate	-0.04	-0.09

4. DISCUSSION

Based on previous results, this chapter aims at discussing and linking different aspects of Environmental Fiscal Reform. The first part assesses the strengths and weaknesses of Vietnam's environmental tax project, pointing out potential for improvement within the existing framework. The second section intends to further develop the concept of EFR for Vietnam by applying general findings on EFR design and instruments to the case study.

4.1. Lessons learned from the case study

After Vietnam's continued economic success during the last decades that contributed to competitiveness gains and poverty alleviation, the reform process has lost pace in recent years. The country is now facing difficulties to balance the state budget, mainly due to lower growth in many economic fields and higher public spending. These facts reflect that Vietnam has reached a stage of development where a solely quantitative economic growth paradigm falls short to address the sustainability challenge. Limited natural resources, environmental pollution and higher demands in terms of the average living standard require shifting the focus of economic development to qualitative aspects.

The Government already focuses its policy on stabilising the economy and the latest reform program of 2012 (NAV, 2011) promotes the restructuring of public investment, state-owned enterprises and the banking sector. In this context, integrating key principles of the green economy concept can ease and strengthen a future-oriented reform process. Vietnam faces high pollution, inefficient use of natural resources, a trade deficit and sovereign debt, a lack of investment capital as well as rising demand and prices on the domestic energy market. As presented in this paper, the instruments of Environmental Fiscal Reform may substantially contribute to addressing these problems. This is partly reflected in Vietnam's "National Green Growth Strategy for the period 2011-2020 with a vision to 2050" (NAV, 2012) which aims at restructuring and greening the economy, promoting resource efficiency and improving living standards.

Taking into account the circumstances of a country in transition and the swift reform process, the case study on Vietnam can be considered a success story. The Environmental Protection Tax Law is consistent with international standards and includes the most important taxable objects. Its scope goes even beyond the range of taxation in many developed countries. The

National Assembly and other relevant stakeholders repeatedly expressed their support for higher rates and additional subjects to tax, which might serve as a good basis for future progress. The fact that there are neither tax exemptions for certain industries nor for fuel use in the aviation and shipping sectors makes the Vietnamese model a frontrunner (RODI et al., 2012).

However, there is ample room for improvement concerning the specific tax rates set by the Standing Committee. For only two out of 17 taxable objects, the current tax rates exceed the legal minimum. Furthermore, the environmental taxes for gasoline and diesel do not allow for additional benefits because they exactly replace the former gasoline and diesel fees.

The current tax rates are close to the low tax scenario applied within the ex-ante impact assessment but do not exactly equal the assumed data. Hence, it remains difficult to quantify the outcomes of the law until the Ministry of Finance will commission an ex-post impact assessment. Willenbockel's model suggests that tax rates close to the lower boundary of the provisioned tax range would have little macro-economic effects. As the tax rates are indeed set close to the lower limit at the moment, the literature review leads to a rather pessimistic conclusion. Furthermore, the available data on revenues from environmental taxes in 2012 suggest that in terms of public funds, the EPT performed worse than the low tax scenario considering inflation.

Nevertheless, when assessing the success of Vietnam's environmental taxes, it is crucial to take into account its initial core objective. The EPT focuses on raising awareness of environmental concerns in society which might lead to efficiency gains, reduce fossil energy demand and ultimately improve environmental quality. From this perspective, the two years of planning and controversial debates after the final introduction of the taxes have definitely contributed to sensitising the public for sustainability.

The reluctance to progress on environmental taxation at the moment is most likely related to two factors that already burden the national purchasing power. On the one hand, energy prices on the world market are rising and impacting on imports. On the other hand, the Vietnamese Government faces high sovereign debt and tries to reduce fossil fuel subsidies which will trigger further national price hikes. Therefore, it might be considered unlikely that the Government will at the same time increase environmental taxes on energy products.

4.2. Potential for improvement in Vietnam's environmental fiscal policy

Based on expert opinion and on findings of the ex-ante impact assessment, the GIZ put forward recommendations on how to improve the draft environmental tax law (GTZ, 2010b). However, due to the difficult economic situation, some suggestions have not yet been considered, including (1) the automatic adjustment of nominal tax rates to inflation in order to maintain the real tax rate; (2) a mid- and long-term roadmap for a slow and gradual increase of environmental taxes to ensure investment certainty and a smooth transition to low-carbon technology; (3) the use of additional tax revenues for monitoring and enforcement activities as well as for environmental purposes, energy efficiency and renewables; and (4) the integration of an annual road tax. According to Ha (2013, s.p.), "the law will probably be revised accordingly when it is suitable ... but no roadmap is foreseen".

As provided by the Environmental Protection Tax Law, the revenues from environmental taxation are allocated to the general state budget. Currently, there are no official provisions to use a certain share of these additional revenues for specific purposes. To take advantage of additional dividends of environmental fiscal instruments, Vietnam needs to develop a concept on revenue spending, to (1) replace other distorting levies such as corporate income tax or trade taxes; (2) invest in R&D, energy efficiency and renewables; or (3) increase pro-poor

spending. If the tax rates are raised significantly in future periods, relief or support schemes for vulnerable households or exposed economic sectors such as fisheries might become necessary.

Regarding levies with environmental relevance, Vietnam currently yields only one of the multiple dividends offered by environmental fiscal instruments. On the one hand, there is significant potential to strengthen the incentive effect and improve the cost recovery function of existing levies. On the other hand, in a resource-rich country facing continuous industrialisation, there is still room to broaden the scope of pricing measures. In this context, Mehling (2008) proposes taxes for forests and fisheries exploitation; user charges on energy and water; a charge for solid waste; and pollution charges applicable to industries and motorised traffic.

Besides several options for improvement related to taxation and cost recovery, Environmental Fiscal Reform contains a third pillar aiming at the phase-out of inefficient subsidies. Although Vietnam provides almost no direct support to fossil fuels, price controls for electricity, coal and refined petroleum products force energy SOEs to make losses. Since Vietnamese households and industry depend on these monopolistic companies, the State ultimately has to compensate for the accumulated deficit. The lack of competition in the energy market hampers efficiency and is thus likely to compound the losses and the need for bail-outs. As a result, necessary investment in energy markets will not materialise due to two main reasons: While SOEs face a lack of capital, there is no level playing field for domestic and foreign private investment (UNDP, 2012).

The Electricity Law (NAV, 2004) and other existing policies aim at the long-term liberalisation of energy markets in Vietnam, with wholesale competition by 2020 followed by retail. However, high inflation rates, vested interests and the newly established link between cheap energy supply and prosperity in society have rendered the reform difficult. Facing rising deficits from 2011, the Government granted greater flexibility to power SOE Electricity Vietnam to set prices. However, after severe price hikes due to surging global energy prices and public protests, prices were not even raised above inflation. In early 2012, EVN declared to cut costs, reduce power losses and improve efficiency whilst moving towards market prices and lower state subsidies (UNDP, 2012).

In mid-2012, there were new attempts to leave fuel prices for the market to determine. Wholesalers were authorised to change prices every ten days without having to seek for permission from the Ministry of Finance, if the adjustment was less than 7%. However, as the actual costs of trading companies remained intransparent, the public perceived price hikes as unjustified. Cost and price calculations of SOEs are subject to little control, which helped them to make high profits when global prices were low whereas losses in times of high prices on the world market are compensated by the State. Furthermore, current policy that allows fuel companies to add a fixed profit margin of 300 VND per litre into their input costs is not compatible with market rules. Overall, it proved to be unreasonable to give pricing freedom to businesses under non-competitive circumstances, with SOE Petrolimex accounting for more than half of Vietnam's fuel market. If necessary price adjustments exceeded 7%, the Government applied other options for price stabilisation, such as reducing import duties and increasing extractions from the stabilisation fund. Although global fuel prices were continuously rising in early 2013, the Ministry of Finance kept prices constant to ensure macro-economic stability and to curb inflation. Consequently, traders suffered from negative margins between import and retail prices and were partly compensated by the stabilisation fund. Experts criticise the Government's policy for increasing the risk of speculation and smuggling. Furthermore, if prices are kept artificially low, it remains a question of time until the fund is exhausted and the public faces even more severe hikes. Indeed, in March 2013, the

gasoline price in Vietnam was sent to a record high and had to be cut two weeks later (KOJIMA, 2013; NEWSPAPERS, 2013).

According to UNDP (2012), “the reform process appears too slow as debts and losses incurred are very substantial and expected to increase with rising global fossil fuel prices, increasing demand and imports, whilst they cause a drag on investment for increasing power supply from e.g. renewable sources and improved electricity distribution”. In order to yield the multiple benefits related to EFR, subsidy reform needs to be promoted in a gradual and phased way, thereby avoiding shocks and inflationary pressure. A level playing field for private and state owned businesses as well as a competitive market are preconditions for efficient market-based pricing. Therefore, the energy market will need to be restructured in a broader sense, following the general aim of economic transition.

Currently, environmental taxes only play a minor role in determining the price of fossil fuels. As long as the Government adjusts fuel prices irrespectively of market rules, by sums exceeding the specific environmental tax rate, the potential incentive effect of taxation is blurred. As a result, it cannot be properly taken into account by businesses or final consumers. As already mentioned for levies with environmental relevance, such pricing measures might create state revenue but the effect on individual behaviour remains negligible. Furthermore, fossil fuel subsidies for SOEs hamper on the EPT’s capacity to set up a level playing field for sustainable production and discourage free market competition. Consequently, there is no incentive to invest for private actors, especially not in renewable energy.

5. CONCLUSIONS AND OUTLOOK

Environmental Fiscal Reform (EFR) translates environmental assets into economic incentives, by means of taxation, cost recovery and subsidy reform. The results of this paper show that EFR can provide equivalent framework conditions and economic incentives for sustainable production and consumption patterns. Leading towards a market-based green economy, EFR simultaneously contributes to resource efficiency, environmental protection and poverty alleviation in countries in transition.

The Socialist Republic of Vietnam faces macro-economic imbalances, environmental and social concerns. As presented in this paper, the instruments of Environmental Fiscal Reform can simultaneously address these problems whilst supporting the transition process towards a market economy. In the field of environmental taxation, the Government of Vietnam has already implemented quite comprehensive legislation. However, if significant social and environmental gains are to be achieved, the specific tax rates will need to be raised in future periods. As a second EFR tool, there are different cost recovery schemes by means of fees and user charges in place. Nevertheless, they need to be raised and expanded to further services in order to better compensate efforts provided by state institutions.

Environmentally Harmful Subsidies in the energy sector remain the major challenge to be addressed. As Vietnam’s energy markets are characterised by costly price controls, a lack of competition and high inefficiency, restructuring and market-based pricing need to be promoted within a broader reform process. As a result, indirect subsidies to state owned enterprises may become obsolete.

Compared to other fiscal policies, environmental taxes only play a minor role in determining the price of energy products in Vietnam. State subsidies hamper on the EPT’s capacity to set up a level playing field for sustainable investment and discourage free market competition.

Therefore, the phase-out of Environmentally Harmful Subsidies in the energy sector is a precondition for efficient market-based pricing and effective environmental taxation.

The rationale behind Environmental Fiscal Reform is well developed and broadly recognised among experts, and its application to transition economies proved to offer multiple co-benefits. Nevertheless, political barriers, economic interests and structural difficulties during the transition process hampered the comprehensive and effective implementation of EFR principles in Vietnam. From this perspective, the implementation of the green economy concept aiming at sustainable development and poverty eradication is not stalling due to a lack of viable solutions, but due to a lack of political momentum and willingness to change.

Overall, the reform process and the related challenges and chances in Vietnam reveal valuable lessons learned for promoting green economy in countries in transition. Furthermore, the progress in Vietnam, China or Thailand justifies more ambitious demands for reform in industrialised countries. Currently, they often provide far-reaching exemptions and other privileges to domestic export oriented industries in order to ensure competitiveness. If emerging economies take a political stance reflecting their commitment to sustainable production, they thus improve the chance for industrialised countries to reduce protective measures that might be environmentally harmful. Hence, even though the effect of a national EFR project may remain small, international repercussions might level up its success.

TABLES AND FIGURES

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- Figure 1: Implications of Environmental Fiscal Reform (own compilation)

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ANNEX I – EXPERT INTERVIEW

Written expert interview via e-mail on the Environmental Protection Tax Law in Vietnam, 27 May 2013

Questions: Petra Sieber, University of Life Sciences, Vienna

Answers: Nguyen Thi Thu Ha, Program Officer Macroeconomic Reform Program, GIZ Vietnam

Question: Based on expert opinion and on the findings of the ex-ante impact assessment concerning the effects of the draft environmental tax law in 2010, the GIZ recommended the following steps, among other things, to the Vietnamese Ministry of Finance:

- The actual nominal tax rate should be at least indexed to inflation in order to maintain the real tax rate and to ensure a positive environmental outcome.
- Vietnam should develop a mid- and long-term roadmap for a slow and gradual increase of environmental taxes to ensure investment certainty and a smooth transition to low-carbon technology.
- The additional revenues should be used for monitoring and enforcement activities as well as for environmental purposes.
- The government should stimulate investments in energy efficiency and renewables.
- The tax rate of coal should be increased in order to avoid undesired substitution effects by refined fuels.
- In the future, an annual road tax should be integrated.

Which recommendations have been implemented so far? Can we expect progressive amendments of the Environmental Protection Tax Law in the near future?

Answer: GIZ recommendations were incorporated in several draft laws before the final draft was approved by the National Assembly. However, due to the difficult economic situation at the time the law was implemented, some suggestions were not taken into the law at the moment, but the law will probably be revised accordingly when it is suitable, such as: Automatic adjustment to inflation, mid-and long-term roadmap for continuous increase in taxes, use of tax revenue for environmental protection activities and investments in energy efficiency and renewable.

Question: Which criteria did the Ministry of Finance take into account when designing the Environmental Protection Tax Law? Are the rates for different taxable objects related to CO₂ emissions, energy content or pollution?

Answer: The tax rates are set based on references to other fees and charges as well as on the affordability for the tax payers.

Question: How much revenues did the Vietnamese Government raise in 2012 by means of environmental taxation?

Answer: The revenues from environmental taxes in 2012 amounted to 12,768 billion VND.

Question: Which proportion of total tax revenue and GDP was raised by environmental taxation in 2012?

Answer: In 2012, the estimated share of environmental taxes in total tax revenue (excluding import and export taxes) was 2.6% and the share of environmental taxes in GDP was 0.45%.

Question: As provided by the Environmental Protection Tax Law, the revenues from environmental taxation are allocated to the general state budget. Are there any official provisions to use a certain share of these additional revenues for specific purposes such as environmental protection or poverty alleviation? Is there any relief scheme in place for exposed economic sectors?

Answer: The tax revenue goes to the general state budget. There are not yet any official rules for the use of certain shares for certain purposes. At the early stage, the objective set out for the implementation of the Environmental Protection Tax Law was to raise the awareness of consumers and to change their behaviour in order to lessen environmental pollution. There is no compensation for particularly exposed sectors of the economy.

Question: Why did the NA's Standing Committee set almost all specific tax rates from 2012 at the lower end of the predetermined tax range (except for HCFC and soft plastic bags), although the National Assembly and other relevant stakeholders repeatedly expressed their support for higher rates? Was there particular pressure from the industry?

Answer: From my personal point of view, the Standing Committee opted for the lower end so that the rates would be affordable for payers in the difficult economic situation the country was experiencing.

Question: Can we expect increases in Vietnam's environmental tax rates in the near future?

That's possible, but no roadmap is foreseen.

Question: Do you see any connection between Vietnam's policy on environmental taxes and the planned phase-out of Environmentally Harmful Subsidies? Some people say that Vietnam will first reduce fossil fuel subsidies which will trigger price hikes on the energy market. Therefore, it might be considered as unlikely that the government will at the same time increase environmental taxes on energy.

Answer: Yes I agree with this opinion.

Question: When does the GIZ plan to start and finish an ex-post impact assessment on the environmental, social and economic effects of the Environmental Protection Tax Law?

Answer: We do not plan this, but this must be initiated by our partner, the Tax Policy Department of the Ministry of Finance. When they have that project, they will probably ask GIZ for technical support.

Question: The current tax rates are close to the low tax scenario applied within the ex-ante impact assessment but do not exactly equal the assumed data. Hence, it might be difficult to quantify the outcomes of the law at the moment. The ex-ante impact assessment suggests that tax rates close to the lower boundary of the provisioned tax range would have little macroeconomic effects. As the tax rates are indeed set close to the lower limit at the moment, I can only draw a rather pessimistic conclusion based on literature review. Nevertheless, the taxes might at least have raised awareness for environmental concerns in society and industry or lead to some efficiency gains. What is your personal or the GIZ's overall impression concerning the success of environmental taxation in Vietnam so far from an environmental, social and economic point of view?

Answer: Yes, the very first objective of the Environmental Tax Law is to enhance the awareness of the society on environment protection, thereby lower the consumption of fossil fuels and improve the environment quality. Concerning this objective, I think the Tax law does have positive effects. Quantitative assessment results are not available as no ex-post impact assessment has been officially conducted.

ANNEX II – COLLECTED NEWSPAPER ARTICLES

General Economy

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