

How Distant is Lisbon from Maastricht? The Short-run Link Between Structural Reforms and Budgetary Performance

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Abstract

This study analyzes the mutual short-run link between structural reforms and budgetary performance. The empirical basis is the reform experience of 20 OECD countries since 1975 with respect to reforms of product, financial and labour markets and the tax system. The testing identifies the typical budgetary features both on the eve of reform and over reform cycles. Furthermore, a dynamic reform model and a model relating reforms to economic sentiments are estimated.

Overall, the results do not point towards a general short-run trade-off between Maastricht and Lisbon since the link between budgetary phenomena and structural reforms is rather weak. While Maastricht and Lisbon tend to be mutually reinforcing for the liberalization of financial and product markets, there can be short-term conflicts for tax and labour market reforms. For all covered policy fields, the results indicate that expectation effects may be a more important part of the link between reforms and the budget compared to other often debated dimensions such as compensation issues.

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1 Introduction

In a number of EU countries, governments are facing a double economic-policy challenge: Not only that many features of labour markets, social security and tax systems are in need of an overhaul given the constraints of an ageing population and increasing global competition. In addition, significant consolidation steps are necessary in order to guarantee long-run sustainability of budgetary policies.

Defining an adequate strategy which successfully copes with these twin tasks requires a thorough understanding of possible conflicts or complementarities between both fields. If budgetary consolidation and structural reforms are of an instantaneously mutually reinforcing nature there would be a strong case of a “big bang” approach combining measures on both policy fields. If, however, there are - at least in the short-run - conflicts it can become necessary to define reform and consolidation sequences carefully.

For the EU, the possible conflicts between budgetary objectives and required structural reforms have a specific framing represented by the fiscal constraints of the Stability and Growth Pact (SGP) on the one and the Lisbon strategy’s growth objective on the other hand. If there is a conflict between budgetary prudence and measures to increase the flexibility of markets and the viability of social security systems, it may be hard to reconcile “Lisbon” with “Maastricht”. The recent reform of the SGP (European Commission, 2005) reflects this potential problem as it has allowed taking account of major structural reforms in the so called “preventive part” of the Pact. Specifically, reforms may now justify a temporary deviation from the given medium term fiscal objectives. Obviously, the Pact’s reformers are convinced that fiscal consolidation and structural reforms are not always complementary undertakings.

The SGP’s contentious reform underlines the need for a more thorough understanding of the link between fiscal prudence and structural reforms. The SGP’s guardian, the Commission, has to decide in future which reform episodes may have an exculpating character for a temporary deterioration of the fiscal position.

Given these policy challenges, this study is to contribute to a better understanding of the link between fiscal prudence and structural reforms. It adds to the limited literature which is surveyed in the next section. This study explicitly does not treat the long-run link between structural reforms and budgetary performance. In regard to the long-run, it is hardly controversial that certain types of structural reforms are able to boost productivity, potential growth and, therefore, alleviate fiscal pressures (see, for example, Nicoletti and Scarpetta, 2003).

This paper contributes new insights to the existing literature in the following respects: First, it clarifies conceptual issues how to disentangle typical fiscal features of reform periods on their outset on the one hand and over the course of the reform cycle on the other hand. Second, it analyzes the mutual link between budgetary policy and structural reforms by looking not only at the budgetary balance but also at specific developments on both sides of the budget. This refinement is important to make a better empirical distinction between different possible mechanisms ranging from compensating reform losers up to demand management considerations. Third, it also studies expectation effects of structural reforms which so far have largely been neglected although they can be of major importance for government budgets. The empirical basis is given by reform indicators depicting structural change of tax system and product, financial and labour market for 20 OECD countries between 1975 and 1998/2002 depending on the policy field.

Overall, the results do not point towards a general short-run trade-off between Maastricht and Lisbon since the link between budgetary phenomena and structural reforms is not very close. However, the results show that the reform-budget-link differs significantly among reform fields. While Maastricht and Lisbon tend to be mutually reinforcing for the liberalization of financial and product markets, there may be some short-term conflicts for tax and labour market reforms. The challenge of tax reforms is the inherent deterioration of the budgetary balance, which, fortunately, is dampened by significant positive growth effects. Labour market reforms appear to suffer from negative expectation effects. For all reform fields, the results indicate that expectation effects may be a more important part of the link between reforms and the budget compared to other often debated dimensions such as compensation issues.

The next section combines a conceptual clarification of the reform cycle with a survey on the existing literature on the short-run mutual link between reforms and budgetary development. Section 3 presents a detailed analysis of the situation on the eve of reforms and the evolution of fiscal and economic variables over the reform cycle. Section 4 presents estimation results for a model of reform processes based on lagged adjustments towards a given target level. Section 5 presents some insights on direct expectation effects of reforms. Section 6 concludes.

2 The arguments and literature survey

There is a small but growing literature aiming at identifying the drivers of structural reforms. With a focus on financial deregulation, Abiad and Mody (2005)¹ have developed a model describing deregulation processes as a lagging adjustment characterized by status quo preferences towards some target level. Helbling et al. (2004), Annett et al. (2004) and Heinemann (2005) have applied this deregulation model to a larger spectre of reform issues including labour markets, product markets, tax and trade reforms. Approaches abstracting from deregulation dynamics but concentrating on explaining the likelihood of reforms under given economic and political circumstances with the help of probit estimations are Pitlik (2003), Heinemann (2004), Duval and Elmeskov (2005), Belke et al. (2005) and Deroose and Turrini (2005). Different reform indicators and different potential drivers of reforms are being tested in this literature including proxies for the state of the economy, the degree of globalization, political-economic factors or the exchange rate system. A number of these studies also discuss the role of the budgetary situation and include fiscal variables among the factors relevant for a country's ability to achieve structural change.

2.1 The arguments

For summarizing and supplementing the main arguments of the literature and as a conceptual framework for the empirical testing it is helpful to work with the following stylized time scheme of a reform cycle.²

Table 1: Stylized scheme of a reform cycle

S	BR	R	SA	LA (=S)
stable institutional setting	instable institutional setting, period before reform takes place	period of reform	period after reform - "short-term"	full realization of reform; period after reform - "long-term" - stable institutional setting

¹ The earlier IMF Working Paper version dates back to 2003.

² It is stylized since it is implicitly assuming a reform process to be a one shot event and not a possibly continuous process as it will be modelled in section 4.

It can be assumed that the link between the reform event in period R and the resulting long-term fiscal situation (period long-term after reform: LA) is favourable. Basically, this positive link is of a tautological nature since the long-run growth and budgetary consequences should be the guiding criterion for choosing and deciding a reform in the first place. There is much less agreement on the other three time dimensions: the typical fiscal situation prior (period before reforms: BR), during (reform period: R) and immediately after (period short-term after reform: SA) the reform event.

Period BR:

The transition from a period of a stable institutional equilibrium to a pre-reform period occurs through a shock or event which changes the balance of interests of decisive actors (Abiad and Mody, 2005). This transition may occur, for instance, through learning processes, changes in the ideologies of governments or changing structural factors like international competition or demographic developments. With regard to the role of the fiscal situation there are counteracting arguments whether a favourable fiscal situation is required to enter a BR period.

One of the strongest results of the above cited literature on the drivers of reforms is that the perception of crisis is conducive for reforms (for further references see also Drazen, 2000). Bad fiscal data may contribute to a general sense of crisis and as such prepare the ground for the acceptance of reforms. If this aspect dominates, period BR should typically be characterized by especially bad fiscal data which constitute one type of crisis symptoms (compared to normal periods S with a stable institutional equilibrium).

The frequently cited compensation argument hints to the contrary expectations that the fiscal situation at the eve of reforms should typically be positive. If politically influential interest groups lose from the reform, compensation packages may be necessary to buy their consent (European Commission, 2005; Grüner, 2002). If this is relevant, there needs to be budgetary room for manoeuvre before a reform can occur. The same requirement applies if accommodating aggregate demand policies can be helpful for a quick realization of benefits from structural reforms (as argued, e.g., by Bean (1998) in the context of labour market reforms). In this case, too, a comfortable budgetary starting point should make it politically more acceptable to initiate structural change. As a consequence of the compensation and aggregate demand arguments, reform periods should be typically preceded by relatively favourable fiscal situations.

Period R:

The latter arguments immediately carry over to period R when the fiscal compensation measures and/or the accommodating demand-policies have to materialize once the reforms are implemented. The resulting deterioration in the budget can be classified as *indirect* (European Commission, 2005; Annett et al., 2004) since it is a politically necessary and not a technically inherent part of the reforms.

A further type of indirect consequences can occur through the impact of reforms on the business cycle. Expectation considerations suggest that there may be immediate expansionary consequences as early as a government credibly commits itself to reforms. Duval and Elmeskov (2005) correctly argue that positive long-run supply side effects can lead to an instantaneous demand reaction. Investors and consumers forming rational expectations may at once increase spending due to the perception of increasing expected returns and/or life time income. This kind of expectation effects have been extensively analysed in the context of the so called “non-Keynesian” effects of fiscal consolidation following the contributions by McDermott and Wescott (1996) and Alesina and Perotti (1997). The analogy in the context of structural reforms is obvious. However, depending on the specific type of institutional change and its public perception, negative demand effects can neither be excluded if the general public is (mistakenly) pessimistic about the reform consequences³ or if, for example, a decrease of social protection leads to an increase in precautionary savings (Duval and Elmeskov, 2005).

In addition, the fiscal position in period R is affected by possible *direct* implications of reforms (European Commission, 2005). Structural reforms can have immediate budgetary consequences that may be negative (the mostly cited example are second pillar pension reforms) or positive (e.g. reforms, which decrease the generosity of existing transfer systems).

It should be stressed that the issue of public perception and immediate expectation effects is of high policy relevance to the whole reform debate and has so far not attracted sufficient attention in the empirical literature. To the extent that positive immediate demand effects materialize all problems related to J-curves and short-run costs would be alleviated.

³ For the US, there is evidence that beliefs of the general public diverge significantly from professional economists’ beliefs on the economic situation and the relevant drivers of economic performance (Caplan, 2002a).

A further argument in the literature (Annett et al. 2004, European Commission, 2005, dating back to Eichengreen and Wyplosz, 1998) refers to a possibly limited political capital which prevents governments following different politically sensitive projects at the same time. Translated in our stylized setting this is no particularly compelling argument to expect increasing deficits in a reform period but it simply suggests that periods of structural reforms are unlikely to be periods of budgetary consolidation either. The validity of this particular argument, of course, depends on the answer to this paper's overall question whether there is a short-run conflict between consolidation and reform at all.

Period SA:

Finally, the fiscal situation in the immediate aftermath of reforms is characterized by the continuous transcendence from the immediate reform period towards the long-run (positive) outcomes. The question how quick the long-run is reached is important for the acceptance of reforms from the start.⁴ There are different reasons why the future is heavily discounted in political processes. A classical political argument refers to election cycles and the short-sightedness of political actors maximizing re-election chances. A behavioural economics argument hints to short-term impatience characterizing human behaviour. Standard assumptions that people maximize the sum of exponentially discounted expected utilities are not supported by experimental research. Instead, a preference bias towards the presence exists in the sense that the discount rate between today and tomorrow is significantly larger than between two periods somewhere in the future (Frederick et al., 2002).

Period S

In the stylized setting, the periods BR, R, and SA are framed by periods of stable institutional setting, S. In S, existing structures correspond to something like a stable equilibrium and transitory effects from former reforms have tapered off.⁵

⁴ In this sense, any attempt to study the economic consequences of observable reform events necessarily suffers from a selection bias. Reforms associated with pronounced J-curve effects are less likely to occur compared to the ones resulting in a quick transcendence to the beneficial "long-run".

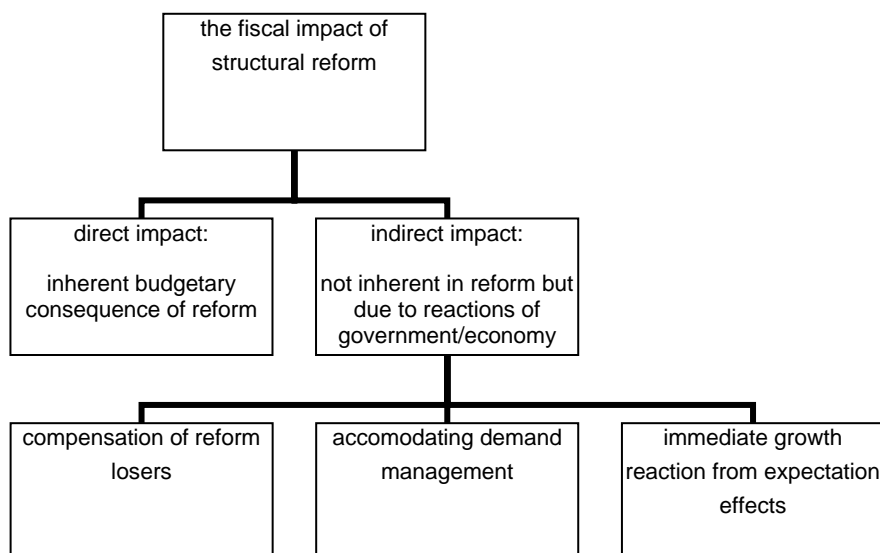
⁵ In reality, things are more complicated as one reform step may breed the next one if, for example, the effects hoped for do not materialize fully, see the model in section 4.

Classification of fiscal effects

In the context of a macroeconomic analysis based on a country panel it is hardly possible to precisely differentiate between the different “stories” being told about the evolution of budgetary policy over a reform cycle (as summarized in figure 1). However, the following properties of reform cycles may offer insights:

While a deterioration of the cyclically adjusted deficit in the course of reforms may be related to either the direct reform consequences, to demand management considerations or to the compensation aspect, a more detailed look at specific categories of the budget may be helpful to differentiate: If, for example, an increase in social spending were behind the deficit deterioration this could be regarded to back the compensation story. Conversely, a largely unspecific increase in the deficit during reform processes tends to support rather the demand management view. Furthermore, if reforms touch the budget mainly via business cycle effects this should be detectable from cyclical variables such as growth, output gap or - more directly and scrutinized explicitly in the following empirical steps - from sentiment indicators.

Figure 1: Classification of budgetary effects of structural reforms



2.2 The findings in the literature

In their time series cross section analysis for the reform experience of OECD countries, Helbling et al. (2004) identify the level of a cyclically adjusted primary balance as a significantly positive determinant of trade deregulation and labour and product market reforms. The change in the balance is significantly negatively related to reforms of labour market and the tax system.

Annett et al. (2004) replicate this finding for labour market reforms in the sense that reform processes tend to be characterized by increasing deficits. For product market, on the contrary, reforms are accompanied by improving government finances.

In its descriptive part of the analysis for EU countries, Deroose and Turrini (2005) have a closer look into different components of the budgets and compare reform with no-reform periods. No significant differences in the overall balance for pension, labour market and product market reforms are found. Some significant differences are detected for single budgetary components: as expected pension reforms tend to reduce social spending and for product market reforms decreasing revenues are matched by decreasing expenditures.

The authors also estimate fiscal reaction functions linking the cyclically adjusted budgetary balance to the output gap, the debt level and reform dummies where the labour market reform dummy has a significantly negative impact on the balance while this is not the case for product market and pension reforms. A probit analysis indicates that higher debt levels increase the likelihood of labour and product market reforms and that a favourable budgetary balance tends to simplify product market reforms. Again, labour market reforms are associated with increasing deficits, at least after 1993.

In their probit estimation for OECD countries 1985-2003, Duval and Elmeskov (2005) include the by now standard fiscal variables (level and change in the cyclically adjusted surplus) and - for a pool of labour and product market reform events - support the view that a sound fiscal situation is helpful for reforms while the change in the surplus is insignificant throughout.

Looking at the literature as a whole it appears by now a well established fact that a good budgetary situation measured by the budgetary balance is typical for the eve of reform while there is some indication that - mostly for labour market reforms - increasing deficits accompany the reform period.

2.3 Unresolved questions

The existing studies leave a number of questions open. Most of the literature merely looks at fiscal policy in a highly aggregated way, restricting empirical tests largely to the budgetary balance and ignoring specific developments on both sides of the budget. Furthermore, a precise analysis of the time profiles of reform related fiscal effects is missing.

A weakness of dominating descriptive approaches is that they do not distinguish between changes within the course of reform cycles on the one hand and differences between stable periods and reform cycles on the other hand. In terms of the stylized setting above a comparison between typical characteristics of R periods with all other periods is not very informative. Instead it is desirable to understand, firstly, which features are typical for the transition from S to PR and, secondly, how economic and fiscal variables evolve from PR to SA. Straightforward comparisons between reform and no-reform periods mix these very different issues up and, hence may lead to misunderstandings.

A further shortcoming is the unclear explanation for the frequent finding of increasing deficits with certain types of reforms. Although the compensation argument is regularly cited in view of this correlation none of these studies is really able to make an empirical distinction between the different possible explanations which, besides compensation, could also be related to direct fiscal implication of reforms or to expectations effects.

Generally, expectation and immediate demand effects are a completely neglected aspect of this empirical literature so far and require further attention.

3 Time profiles and properties of reform periods

3.1 Data and approach

Reforms are measured as changes in the restrictiveness of government regulation of product, labour and financial markets and a measure for the degree of distortions associated with the country's tax system. Data on regulatory rigidity originate from the data collection used in the World Economic Outlook (WEO) 2004 (Helbling et al., 2004, Appendix 3.1. for details on sources and construction). The 20 OECD countries covered are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland,

United Kingdom and United States. The time series start in 1975 and extend to 1998 for labour and product markets, to 2000 for the tax system and to 2002 for financial markets.

All indicators are normalized to range from 0 to 1 where an increasing value signals a declining degree of restriction. They are calculated as an unweighted average of sector-specific indicators depicting different dimension of regulatory intervention.

The regulation indicator for the financial sector takes account of the existence of credit controls, interest rate controls and restrictions on international financial transactions. Thus, this indicator does not include regulatory issues linked to reporting and financial stability oriented monitoring of the financial sector which, certainly, would show very different time trends.

The labour market indicator is constructed on the basis of the Labour Market Institutions Database developed by Nickel and Nunziata (2001) and is the aggregate of sub-indicators on employment protection, benefit replacement rates and benefit duration. It excludes information on wage centralization since for numerous countries there is no time variance for related variables.

The product market indicator was constructed by Nicoletti and Scarpetta (2003) and combines indicators on barriers to entry, public ownership, market structure, vertical integration of networks and final consumer services, and price controls for the following non-manufacturing sectors: gas, electricity, post, telecommunications, passenger air transport, railways and road freights. It thus covers the sectors which used to be characterised by heavy government involvement and protected monopolies/oligopolies in the past.

The tax system indicator is based on the following variables: top marginal income tax rate, the total tax revenue share of indirect taxes, the labour and capital income tax ratio and the absolute difference between labour and capital income tax ratios. The authors argue that these indicators are good summary proxies for the growth and employment reducing distortions associated with the tax system (Helbling et. al, 2004, p. 133/134). Note that the design of the tax variable implies that it is largely driven by the structure of the tax system and less by the overall size of tax revenues (and hence the size of the public sector).

Definition of reform event

Any classification of significant reform events is necessarily arbitrary. The selection approach followed here is to choose the critical level of change to qualify as significant reform in such a way that at least ten per cent of all country year combinations are included.⁶ Hence, this analysis implies a focus on relatively substantial reform events. See table A-2 in the appendix for the resulting list of reform periods.

The following variables representing budgetary and business cycle developments and the economic expectations of private households and business are included in the testing, where fiscal and business cycle data originate from the OECD Economic Outlook database whereas sentiment indicators are calculated as annual averages of monthly data from the European Commission for EU countries and from national sources elsewhere. Sentiment indicators are employed after standardization:

Fiscal variables (notation following OECD Economic Outlook database):

Deficits and debt:

- general government net primary lending as % GDP (NLGXQ),
- general government net primary lending cyclically adjusted as % trend GDP (NLGXQA),
- debt-GDP-level in % (DEBT)

Government expenditures:

- general government total primary expenditure as % GDP (YPGXQ)
- general government total primary expenditure cyclically adjusted as % trend GDP (YPGXQA)
- social security benefits paid by government as % GDP (SSPGQ)

Government revenues:

- general government total revenue as % GDP (YRGQTQ)
- general government total revenues cyclically adjusted as % trend GDP (YRGQA)

⁶ The algorithm results in classifying a larger share than 10 per cent of observations as reforms due to value clusters for the change in the regulatory indicators.

- total taxes as % GDP (TYQ)⁷
- total taxes cyclically adjusted as % trend GDP (TYQA)

Business cycle variables:

- growth real GDP in % (GROWTH)
- growth domestic demand in % (GROWTHFDDV)
- output gap in % (OUTPUTGAP)
- unemployment rate in % (UNEMP)
- change in unemployment rate in percentage points (DUNEMP)

Consumer confidence/spending:

- consumer confidence yearly average standardized (CCONFST)
- savings ratio in % (SRATIO)
- growth private consumption in % (GROWTHCPV)
- growth private residential investment in % (GROWTHIHV)

Business confidence/investment:

- business confidence yearly average standardized (BUSCONFST)
- growth business investment in % (GROWTHIBV).

This analytical section is to make a clear distinction between the following two questions: First, to which extent are the economic and fiscal features of reform periods different from periods with relatively stable institutions? And, second, how do these features evolve from the pre-reform situation over the reform period itself up to the years immediately after a reform? So far, these questions have not been precisely distinguished in existing descriptive approaches.⁸

In this section, the results of two tests are presented to shed lights on typical budgetary features of reform processes according to those two distinct questions.

⁷ Further differentiations between household and business taxation was included in the testing but did not result in any further insights and, hence, are not reported.

⁸ European Commission (2005), for example, tests for differences between reform and no-reform periods. This test does not allow whether resulting differences are related to changes occurring within a reform cycle or to differences between periods of stable institutions and (multi-annual) periods of reform cycles.

The first test's focus is on the typical properties of budget and the economic environment prior to a reform (period BR in the terminology of the stylized reform phasing of the last section).

The second test concentrates on the evolution of the budget and the business cycle in the course of reforms (from period BR to period SA).

3.2 Features of pre-reform periods

In order to detect typical features of pre-reform periods the following equation is estimated⁹:

$$(1) \quad Y = X\beta + \gamma Reform + \varepsilon$$

Here, Y is the scrutinized fiscal or economic variable and X is a complete matrix of country and year dummies. *Reform* is a dummy equal to 1 for the two years before a reform event occurs unless these periods are at the same time years following a reform event with lag one or two. The purpose of this procedure is to limit the test to clear cases of pre-reform years that are not at the same time affected by the consequences of recent reforms.¹⁰ In terms of the above suggested stylized scheme of reform cycles this tests amounts to searching for significant differences between period BR and S. Note that the time and country dummies neutralize year specific and country specific factors. The impact, for example, of global business cycle trends is thus neutralized.

⁹ This test has been suggested in a completely different context by Caplan (2002b).

¹⁰ This refinement is only relevant in the presence of a consecutive sequence of reforms with some reform pauses in between. In these cases, our algorithm only treats the years prior to the start of the whole sequence as pre-reform years.

Table 2: Specific features of pre-reform periods in equation (1)

	impact of dummy for reform			
	R ² of regression, coefficient (standard error)			
Dependent variable	labour market	financial sector	tax policy	product market
	deficit and debt			
NLGXQ	0.23, -0.25 (0.51)	0.33, 0.46 (0.40)	0.30, 0.80 (0.45)*	0.22, 0.54 (0.45)
NLGXQA	0.24, -0.09 (0.44)	0.29, 0.14 (0.36)	0.29, 1.33 (0.41)***	0.24, 0.81 (0.39)**
DEBT	0.56, 3.59 (2.44)	0.48, -1.38 (2.27)	0.65, 3.50 (2.34)	0.56, 3.08 (2.22)
	expenditures			
YPGXQ	0.38, 0.60 (0.51)	0.34, -0.23 (0.41)	0.38, 0.57 (0.46)	0.39, 0.22 (0.44)
YPGXQA	0.34, 0.44 (0.41)	0.30, -0.13 (0.34)	0.31, -0.03 (0.37)	0.35, -0.13 (0.36)
SSPGQ	0.47, 0.46 (0.28)*	0.43, -0.16 (0.22)	0.53, 0.48 (0.023)**	0.48, 0.13 (0.23)
	revenues			
YRGTQ	0.44, 0.35 (0.46)	0.40, -0.02 (0.38)	0.44, 1.79 (0.41)***	0.44, 0.33 (0.41)
YRQQA	0.41, 0.28 (0.45)	0.37, -0.20 (0.38)	0.42, 1.74 (0.41)***	0.41, 0.30 (0.39)
TYQ	0.18, -0.00 (0.27)	0.21, 0.02 (0.22)	0.22, 0.86 (0.24)***	0.19, 0.36 (0.23)
TYQA	0.18, -0.07 (0.26)	0.20, -0.10 (0.21)	0.20, 0.84 (0.24)***	0.18, 0.28 (0.22)
	business cycle/labour market			
GROWTH	0.29, 0.00 (0.00)*	0.29, 0.00 (0.00)	0.32, -0.01 (0.00)*	0.28, -0.00 (0.00)
GROWTHFDDV	0.21, 1.42 (0.47)***	0.20, 0.51 (0.34)	0.23, -0.64 (0.39)	0.19, -0.85 (0.40)**
OUTPUTGAP	0.31, 0.11 (0.45)	0.34, 0.45 (0.32)	0.35, -0.16 (0.36)	0.32, -0.76 (0.37)**
UNEMPLOYMENT	0.44, 0.63 (0.36)*	0.41, 0.05 (0.28)	0.50, 0.55 (0.32)*	0.46, 0.27 (0.30)
Δ UNEMPLOYMENT	0.32, -0.22 (0.17)	0.36, -0.13 (0.13)	0.36, 0.42 (0.15)***	0.32, -0.03 (0.14)
	consumer confidence/spending			
CCONFST	0.29, 0.56 (0.19)***	0.35, 0.05 (0.16)	0.30, -0.39 (0.19)**	0.27, -0.44 (0.16)***
SRATIO	0.25, 0.10 (0.57)	0.28, 0.54 (0.48)	0.39, -0.84 (0.47)*	0.20, -0.01 (0.51)
GROWTHCPV	0.19, 1.16 (0.41)***	0.18, 0.16 (0.31)	0.21, -0.58 (0.35)*	0.18, -0.45 (0.35)
GROWTHIHV	0.16, 4.98 (1.88)***	0.14, 2.42 (1.43)*	0.12, -1.35 (1.71)	0.12, 0.22 (1.73)
	business confidence/investment			
BUSCONFST	0.42, 0.43 (0.21)**	0.40, 0.37 (0.18)**	0.38, -0.42 (0.19)**	0.40, -0.03 (0.17)
GROWTHIBV	0.26, 2.81 (1.50)*	0.26, 1.02 (1.11)	0.34, -2.08 (1.23)*	0.25, -2.28 (1.25)*

*, **, ***: significant at 10 %, 5 %, 1 % level respectively

For deficits the testing indicates that there are no significantly different overall budgetary conditions on the eve of labour and financial market reforms compared to other periods. Contrary to that, deficits tend to be significantly lower in periods preceding product market and tax reforms. For example, the cyclically adjusted deficit is 1.3 percent of GDP lower in periods before tax reforms are taking place compared to all other periods. The high significance in case of tax reforms is hardly surprising: Budgetary leeway is helpful to initiate legislation aiming at reducing tax distortions.

The separate look into both sides of the budgets does only bring about few but revealing significant results: social spending is significantly up prior to labour market and tax reform and tax revenues are up prior to tax reforms.

For labour market reforms, the findings signal different insights with regard to the role of economic crisis. Definitely, a bad cyclical situation is not helpful to prepare the ground for deregulating labour markets, on the contrary: Reform cycles start in periods with significantly above normal growth, strong internal demand and a high level of consumer and business confidence. This is an interesting insight: Times of mental depression are obviously no times to embark on dismantling labour market protection or cutting unemployment benefits. Interestingly the level, not the change in the unemployment rate, is significantly higher prior to reforms. This could be cautiously interpreted as a positive impact of structural and not cyclical unemployment on the likelihood of reforms.

The testing for financial market reforms does not hint towards significant characteristics on the outset of financial market reforms apart from a higher business confidence and private housing investment. The findings for tax and product market reforms are more in line with the crisis hypothesis since here a number of significantly worse business cycle indicators indicate a relatively poor situation in the two years preceding reforms. The typical situation in the years before a tax reform is undertaken is thus one of a combination of a relatively comfortable budgetary situation with a poor growth performance.

The situation prior to reforms thus reveals some insights on the fiscal preconditions for reforms. Clearly, a favourable budgetary situation simplifies tax and product market reforms. For a better understanding of the fiscal repercussions of reforms it is necessary to follow fiscal and economic indicators over the reform cycle which is the next analytical step.

3.3 Developments over the reform cycle

The second, distinct step of the descriptive scrutiny targets at detecting significant differences in the economic and fiscal setting over the reform cycle. After the first step was meant to show to which extent the starting position of reforms is different to years of institutional stability, the attention shifts now towards the evolution over the reform process.

Focusing the analysis on years around major reforms drastically limits the number of included observations so that the same test as in the first step requiring a large number of observations cannot be applied. Instead, an analysis of variance is executed comparing means before, during and after a reform event. Before and after a reform year two years are taken account of. Years between reform events are coded as “before” or “after” depending on their closeness to the particular reform event.¹¹ The analysis of variance tests for significant differences in the mean of economic and fiscal variables before, during, and after the reform event. Where the F-test indicates significant overall differences between means, a pair wise test for differences in mean is added¹² (employing the Bonferoni correction for multiple testing). Translated into the terms of the stylized reform cycle above the test algorithm relates to differences between periods BR, R and SA in combination (analysis of variance) and, subsequently, for differences between BR and R, BR and SA and R and SA (pair wise tests).

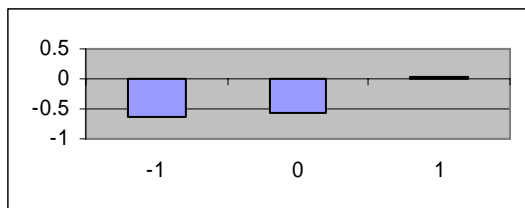
Figure 2 depicts the evolution of the means in government primary net lending. Table 3 summarizes the results of the testing, figures A-1 to A-4 in the appendix show the development of means of important further fiscal variables over the reform cycle.

¹¹ Single years between reform events are dropped; the same applies to the central year of a three year reform pause.

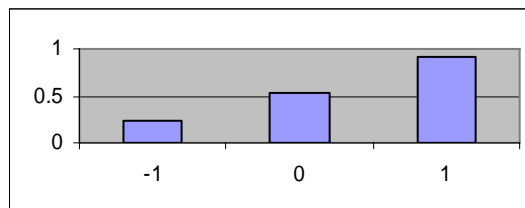
¹² The analysis of variance only allows inferring whether differences in mean among included classes are significant in total without saying which pairs of means are significantly different. Simple t-tests would lead to biased results due to the problem of multiple testing.

Figure 2: Means government primary net lending, cycl. adjusted in % trend GDP (NLGXQA), over reform cycle

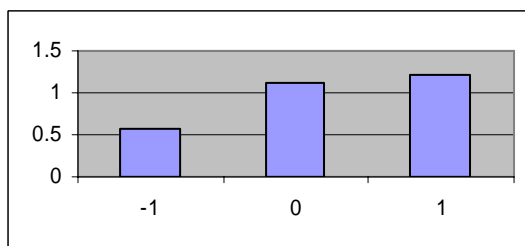
Financial market



Labour market



Product market



Tax system

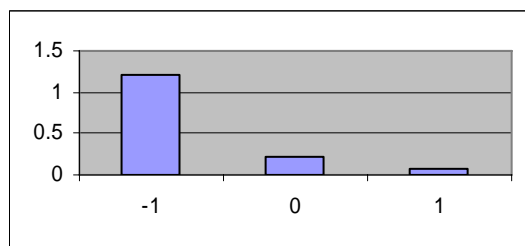


Table 3: Analysis of variance and pair wise mean tests

	Financial market		Labour market		Product market		Tax system	
	F-stat	sign. pair wise differences	F-stat	sign. pair wise differences	F-stat	sign. pair wise differences	F-stat	sign. pair wise differences
	deficit and debt							
NLGXQ	0.06	-	0.80	-	1.26	-	1.20	-
NLGXQA	1.29	-	0.48	-	0.78	-	1.88	-
DEBT	1.93	-	1.13	-	0.17	-	0.20	-
	expenditures							
YPGXQ	0.51	-	0.75	-	0.45	-	0.16	-
YPGXQA	0.36	-	1.03	-	0.15	-	0.11	-
SSPGQ	1.36	-	0.78	-	0.34	-	0.19	-
	revenues							
YRGTQ	0.33	-	0.77	-	0.15	-	0.11	-
YRGQA	0.71	-	0.81	-	0.13	-	0.10	-

TYQ	0.45	-	0.31	-	0.36	-	0.28	-
TYQA	0.69	-	0.31	-	0.43	-	0.29	-
	business cycle/labour market							
GROWTH	0.62	-	1.85	-	2.24	-	7.14***	-1<1** 0<1***
GROWTHFDDV	0.95	-	2.26	-	3.77**	-1<1**	5.09***	-1<1** 0<1**
OUTPUTGAP	3.31**	1<-1**	0.76	-	1.85	-	1.93	-
UNEMPLOYMENT	1.68	-	0.48	-	0.22	-	0.61	-
Δ UNEMPLOYMENT	0.14	-	0.57	-	2.12	-	7.77***	1<-1*** 1<0***
	consumer confidence/spending							
CCONFST	1.43	-	2.70*	1<-1*	4.40**	-1<1**	4.59**	-1<1**
SRATIO	0.57	-	0.35	-	0.49	-	0.11	-
GROWTHCPV	0.83	-	2.75*	1<-1*	2.19	-	4.69**	-1<1** 0<1**
GROWTHIHV	0.12	-	1.24	-	0.42	-	0.11	-
	business confidence/investment							
BUSCONFST	5.58***	1<-1*** 0<-1**	3.33**	1<-1**	0.55	-	1.48	-
GROWTHIBV	1.83	-	0.83	-	2.89*	-1<1*	2.96*	0<1*

*/**/***: 1/5/10 per cent significance; in pair-wise difference tests: -1: period prior to reform, 0: reform period, 1: period post-reform

It is a remarkable result that the fiscal variables - neither deficits nor expenditures nor revenues, neither unadjusted nor cyclically adjusted - show any significant differences over the evolution of the reform process. Only the deterioration of the primary deficit in the course of tax reforms reaches a significance level not too distant from usually accepted critical levels (16 per cent). Figure 2 suggests that this pattern is tax reform specific. For no other reform field there is an increase of structurally adjusted deficits parallel to reforms. On the contrary, the (insignificant) differences in means hint towards falling deficits during reform episodes.

In contrast to these largely insignificant results, the differences in terms of growth and other business cycle related indicators are more pronounced. Growth clearly picks up quickly in the course of tax and product market reforms. This upturn is supported by a fast increase in optimism among consumers feeding into higher growth of private consumption. Obviously, the data point to a swiftly materializing growth dividend for tax and product market reforms. In case of tax reforms this finding hints to a partially self-financing effect of tax reforms which can also be seen from the less pronounced reaction of the non-adjusted compared to the cyclically adjusted primary deficit.

Although labour market reforms are not associated with a significant decline in growth rates¹³ they have nevertheless a clear negative impact on the sentiment of consumers and firms. Furthermore, a significant decline in private consumption is noticeable within the labour market reform cycle.

This section's findings allow some cautious conclusions about the relative importance of reforms' budgetary consequences. Demand management or compensation patterns are not strongly supported. Neither for labour market, nor for product nor for financial market reforms, can any systematic increase in the cyclically adjusted deficit be detected. For tax reforms the results suggest an unsurprising direct fiscal implication of tax reforms in forms of a falling primary surplus (which is affordable given the initial favourable situation typical prior to tax reform).

However, there is support for indirect fiscal consequences affecting the budget via short-run growth effects. These effects appear to be positive for tax system and product market reforms and negative for labour and financial market reforms.

Overall both tests as described in both the last and this section do not show much support for a strong fiscal impact even of major reform processes unless they are related to the fiscal system itself as it is the case with tax reforms. Structural reforms and fiscal performance appear to be quite detached developments.

An interesting link occurs with regard to the employed expectation indicators. Tax and labour market reforms tend to be started when the general economic mood is relatively depressed or positive, respectively. This corresponds to the fact that, once a reform process is initiated, the confidence is boosted by tax reforms and dwindles with labour market reforms. Clearly, the results suggest that expectation effects may constitute an important link between reforms and the budgetary situation and deserve more attention.

¹³ The F-test results in a confidence level of 0.16.

4 Estimating a dynamic reform model

So far, reform events have been treated in a somewhat schematic way as one-off events characterized as quick and short-run adjustments towards a new environment. This simplification has been helpful to improve our understanding of some typical reform patterns, it does, however, not capture the full dynamics of reform processes. Even when limiting the perspective to relatively big reforms the results show that, sometimes, there are series of events with frequent structural adjustments within a number of consecutive years before a new equilibrium is reached (see table A-2 in the appendix). Furthermore, the preceding analysis had to abstract from the experience of countries implementing strategies of slow but continuous reforms.

Given these limitations, the perspective is broadened in this section. The idea is to search now for the impact of fiscal and general economic variables in the course of reform processes. In addition, the testing is to look for a possible impact of reforms on consumer and investor expectation which would be a further proof for the existence of a type of indirect budgetary reform effects that have been neglected so far.

For these purposes, two models are tested. The first one extends the specification of reform processes of Abiad and Mody (2005) and includes a number of detailed fiscal variables. The second one is a simple model relating consumer and business confidence towards both reforms and the fiscal stance while controlling for the general economic environment.

Starting point is the specification developed by Abiad and Mody (2005) and applied by Helbling et al. (2004), Annett (2005) and Heinemann (2005). This model allows for the series of reforms to be driven by a steady convergence of regulation to some “optimum” level of regulation $REG_{i,t}^*$. In this notation, larger levels of REG are associated with less restrictive regulatory regimes.

$$(2) \quad \Delta REG_{i,t} = \mu(REG_{i,t}^* - REG_{i,t-1}) + \varepsilon_{i,t}$$

If the status quo bias is relevant the values of μ should be below 1. This parameter of institutional stickiness is assumed to depend on the strictness of current regulation:

$$(3) \quad \mu = k REG_{i,t-1}$$

Thus, this specification allows for learning: Deregulative reforms can be helpful to limit uncertainty about the outcomes of deregulation. In this case, reforms can be self-enforcing.

Furthermore, this basic adjustment process is driven by further determinants including some element of international interaction where the distance to the regulatory situation of the benchmark group (REG^{BM}) has an impact on the country's deregulation path.¹⁴ The inclusion of this element is particularly relevant in the European context, where cross-border learning is regarded as an important element of EU policy cooperation – long before the “Open Method of Coordination” has become explicit. This setting results in the following testable specification:

(4)

$$\Delta REG_{i,t} = \alpha_1 REG_{i,t-1} + \alpha_2 REG_{i,t-1}^2 + \alpha_3 (REG_{i,t-1}^{BM} - REG_{i,t-1}) + \sum_{k=1}^K \beta_k x_{k,i,t} + \varepsilon_{i,t}$$

In (4) the coefficient α_3 measures the impact of cross-border regulatory interactions and the β -coefficients the influence of the further control variables. By construction, $\alpha_1 = k * REG_{i,t-1}^*$ and is expected to be positive, whereas $\alpha_2 = -k$ would be negative if the status quo bias really loses power due to learning from deregulation. From this reduced form, the implicit “optimum” level of regulation equals $\alpha_1 / (-\alpha_2)$.

The two baseline specifications include following control variables among the x : GDP growth, the extent of FDI flows as a measure of globalization constraints¹⁵ (sum of absolute values of in- and outflows in % GDP), an EU dummy, dummies for governments led by centre and left parties (compared to governments led by right parties).¹⁶ Besides these control variables a second baseline specification includes business and consumer

¹⁴ It is left open which specific cross-border interdependencies may drive the interaction, possible explanations range from mobility of regulatory sensitive factors over direct regulatory externalities up to phenomena of yardstick competition where voters judge governments by comparison to policies in third countries (see Brueckner, 2003, for an overview of strategic interactions among governments).

¹⁵ In Heinemann (2005), the FDI variable appeared to be a more important measure of globalization constraints of regulatory policies compared to other frequently used variables such as trade openness.

¹⁶ For data sources, see Table A-1 in the appendix.

confidence indicators, which come at the cost of a substantial loss in the number of observations and which, therefore, will not be used in the subsequent consecutive inclusion of fiscal variables. The benchmark variable is constructed as the difference of the regulatory situation vis-à-vis the EU average for European countries and vis-à-vis the USA for non-European OECD countries.

Any dynamic fixed effect estimation faces econometric problems due to the correlation of the error term with the “within” transformed regressors and a resulting bias. The frequently applied solution with small T is the application of GMM techniques along the lines of Arellano and Bond (1991). However, this solution has been shown to come at the costs of imprecise estimates (Attanasio et al., 2000). Since the time dimension of the regressions is relatively long (the specifications include up to 26 years) the trade-off hints towards the application of standard OLS estimates. Endogeneity problems related to a possible impact of reforms on some of the control variables such as growth or the confidence indicators are limited by the use of lagged right hand variables.

The baseline regression reveal marked differences in reform dynamics among different policy fields. For product and financial market reforms both variants of the baseline robustly point to a stable implied optimum level of deregulation being close to unity (which is defined as the fully liberalized status). In contrast to that, no stable optimum level emerges for labour and tax reforms. The same structure applies to the cross-border interaction term: Whereas for product and financial market reforms the benchmark plays a significant role this is not supported for tax and labour market reforms. Conversely, the political orientation has a significant impact in both variants of the benchmark only for the labour reform regression. Low growth is speeding up reforms of the tax system and financial markets in line with the crisis hypothesis. The insignificance of the EU dummy could be due to the fact that the construction of the benchmark variable already covers cross-border links related to European integration. The inclusion of business and consumer sentiment indicators results only in few significant coefficients: business sentiment affects the speed of reforms of labour markets and tax systems in a positive way.¹⁷

Overall, this picture is consistent with a view that reform trends have been more stable and internationally linked for product and financial market reforms whereas in the realm of

¹⁷ For labour market this supports the descriptive finding that a favourable economic situation smoothes reforms whereas for taxes the finding stands in contrast to the descriptive results that the situation prior to tax reform tends to be relatively depressed.

labour market reforms and tax policies constant and internationally consistent unidirectional trends have not materialized in the covered period.

Table 4: Dynamic reform model - baseline specifications

	labour market (Δ WEOLABOUR)		financial regulation (Δ WEOFINANCE)		product market (Δ WEOPRODUCT)		tax reform (Δ WEOTAX)	
reform indicator. (-1)	-0.330 (0.095)***	-0.176 (0.257)	0.406 (0.064)***	0.389 (0.144)***	0.141 (0.030)***	0.107 (0.048)**	-0.331 (0.176)*	-0.147 (0.283)
reform indicator. squared (-1)	0.235 (0.091)***	-0.091 (0.139)	-0.383 (0.052)***	-0.411 (0.101)***	-0.106 (0.036)***	-0.081 (0.056)	0.227 (0.175)	0.064 (0.266)
reform indicator divergence benchmark (-1)	-0.032 (0.039)	-0.121 (0.177)	0.126 (0.029)***	0.149 (0.045)***	0.131 (0.024)***	0.172 (0.044)***	-0.005 (0.024)	0.032 (0.057)
GROWTH (-1)	0.029 (0.030)	-0.076 (0.077)	-0.388 (0.204)*	-1.026 (0.475)**	-0.013 (0.057)	0.026 (0.168)	-0.124 (0.054)**	-0.354 (0.131)***
FDI (-1)	0.0003 (0.0004)	-0.0009 (0.0006)	0.0001 (0.0008)	0.0002 (0.0008)	0.002 (0.0009)*	-0.009 (0.0020)	0.00002 0.0003	-0.00003 (0.0003)
EU member dummy	0.002 (0.003)	-0.005 (0.007)	0.025 (0.019)	0.030 0.043	0.002 (0.005)	-0.009 (0.015)	0.007 (0.005)	0.014 (0.010)
centre government (-1)	-0.013 (0.003)***	-0.032 (0.006)***	-0.011 (0.021)	0.014 (0.031)	0.00002 (0.006)	0.013 (0.014)	-0.001 (0.005)	0.004 (0.008)
left government (-1)	-0.004 (0.002)**	-0.004 (0.003)	-0.007 (0.010)	-0.014 (0.014)	-0.006 (0.003)**	0.002 (0.006)	0.005 (0.003)*	0.005 (0.004)
CCONFST (-1)		0.0008 (0.001)		0.006 (0.008)		-0.003 (0.003)		-0.002 (0.002)
BCONFST (-1)		0.003 (0.001)**		0.001 (0.007)		0.002 (0.003)		0.006 (0.002)***
nb. of observations/nb. of countries	436/20	216/17	498/20	268/18	461/21	231/19	388/18	226/17
R-squared	0.16	0.25	0.17	0.27	0.21	0.12	0.12	0.14

The baseline (without the sentiment indicators) is now consecutively augmented by the detailed list of fiscal variables (both lagged level and difference), table 5 summarizes the results.

Table 5: Coefficients of fiscal variables in consecutive inclusion in baseline

	impact in reform regression coefficient (standard error)			
determinant	labour market	financial sector	tax policy	product market
	deficit			
NLGXQA	-0.00052 (0.00031)*	0.00162 (0.00184)	0.00110 (0.00057)*	-0.00053 (0.00061)
Δ NLGXQA	-0.00081 (0.00046)*	-0.00188 (0.00309)	-0.00225 (0.00084)***	-0.00041 (0.00091)
NLGXQ	-0.00061 (0.00026)**	0.00175 (0.00148)	0.00092 (0.00046)**	-0.00086 (0.00050)*
Δ NLGXQ	-0.00084 (0.00043)*	-0.00395 (0.00261)	-0.00134 (0.00081)*	-0.00097 (0.00081)
	expenditure			
YPGXQA	0.00037 (0.00035)	0.00418 (0.00214)*	-0.00010 (0.00056)*	0.00090 (0.0006)
Δ YPGXQA	0.00095 (0.00070)	0.00399 (0.00466)	0.00162 (0.00130)	0.00019 (0.00131)
YPGXQ	0.00041 (0.00028)	0.00204 (0.00165)	-0.00038 (0.00043)	0.00099 (0.00046)**
Δ YPGXQ	0.00081 (0.00063)	0.00619 (0.00391)	-0.00049 (0.00119)	0.00052 (0.00114)
SSPGDP	0.00045 (0.00044)	0.00265 (0.00289)	-0.00013 (0.00068)	0.0024 (0.0008)***
Δ SSPGDP	0.00197 (0.00131)	0.01078 (0.00880)	-0.00322 (0.00232)	0.0032 (0.0025)
	revenues			
YRGQA	-0.00016 (0.00028)	0.00463 (0.00179)*	0.00043 (0.00055)	0.00011 (0.00056)
Δ YRGQA	-0.00055 (0.00058)	0.00455 (0.00398)	-0.00174 (0.00106)	0.00016 (0.00118)
YRGTQ	-0.00017 (0.00029)	0.00438 (0.00163)***	0.00101 (0.00049)**	0.00010 (0.00512)
Δ YRGTQ	-0.00072 (0.00054)	0.00259 (0.0035)	-0.00191 (0.00096)**	-0.00050 (0.00104)
TYQA	-0.00096 (0.00051)*	0.00499 (0.00313)	0.00128 (0.00103)	0.00015 (0.00108)
Δ TYQA	0.00007 (0.00089)	0.00688 (0.00576)	-0.00131 (0.00153)	0.00048 (0.00184)
TYQ	-0.00102 (0.00048)**	0.00478 (0.00284)*	0.00210 (0.00097)**	-0.00028 (0.00094)
Δ TYQ	-0.00003 (0.00082)	0.00181 (0.00509)	-0.00140 (0.00150)	-0.00141 (0.00157)

*, **, ***: significant at 10 %, 5 %, 1 % level respectively

The net primary balance has a robustly significant impact only in the labour market reform and the tax reform processes. Labour market reforms tend to be accelerated by bad and deteriorating budgetary data (both cyclically adjusted and non-adjusted), tax reforms are simplified by high budgetary balances which tend to deteriorate. For labour market reforms, the look at both sides of the budget does not show a typical compensation pattern with an increase in (social) spending. Only the difference of social benefits reaches

significance levels close to conventional significance levels (0.13) and could be regarded as a weak hint towards compensation. A stronger result is that for labour market reforms, relatively low tax receipts tend to be behind the relatively poor budgetary balance.

The comfortable budgetary situation which characterizes periods of tax reforms is related to both relatively low (cyclically adjusted) expenditure levels and (non-adjusted) tax receipts.

Whereas the overall budgetary balance is largely insignificant in the product market reform regression there are interesting findings for single budgetary categories: Product market reforms appear to be prepared by higher social spending.

Financial reforms are preceded by above normal revenues and expenditures (cyclically adjusted) with no specific focus on social benefits.

5 The direct impact of reforms on business and consumer confidence

As final step of the analysis now a closer look is taken at the direct impact of reforms on the economic sentiment of consumers and companies. Reforms may reach sentiment via an indirect and a direct channel. The indirect impact results from reforms' impact on growth, employment and other economic variables which, in turn, bear upon the mood of consumers and companies. The tests of section 3.2 can be understood as a test for the existence of any such indirect effect (which turned out to be positive for tax and product market reform and negative for labour and financial market reform).

The direct impact is related to expectations about reforms' effects before these effects have materialized. In a sense, the measurement of the direct impact resembles a test on the economic agents' perception about the economic merits of reforms. A positive (negative) sign would indicate that agents share the view that liberalizing reform will foster (reduce) economic well-being. There is no doubt that this perception issue is also of fiscal importance. A significant positive expectation effect is a sign that the reform as such stabilizes expectations and, as a consequence, strengthens demand and the budgetary situation.

To test for direct expectation effects the dependent variable - the standardized consumer and business sentiment indicators - are regressed on the lagged endogenous variable, the

reform variable (the change in the regulatory index) and a number of standard business cycle and fiscal variables: GDP growth, change in unemployment, the inflation rate, the level and change of the (cyclically adjusted) government balance. An instrumental variable specification is estimated in order to cope with the clearly present reversed causality problem.¹⁸

Tables 6 and 7 summarize the regression results for business and consumer confidence. Apart from the highly significant autoregressive term, sentiment is driven by growth, the inflation rate (more pronounced for consumer than for business sentiment), the change in the unemployment rate (more pronounced for business sentiment) and the budgetary situation (only for consumer sentiment). Signs are generally as expected.¹⁹ The results for the level of the government balance in the consumer confidence regressions suggest that a solid fiscal situation stabilizes consumer expectations.

There is no indication that reforms are associated with direct negative expectation effects. On the contrary, tax reforms have a highly significant direct effect towards fostering optimism in the business sector. Product market reforms miss the 10 per cent significance by a thin margin (significance level is 0.107) in the business sentiment regression. The results underline the findings from the reform cycle analysis that tax system and product market reforms are characterized by a favourable time pattern of quickly materializing reform benefits. Results from the inclusion of measures of overall reform intensity by calculating the sum of reform proxies across policy fields are not reported: This variable (including a squared variant) was insignificant and did not support the view that a big bang approach combining reforms over different fields at the same time has a significantly more favourable expectation effect.

¹⁸ Variables mainly related to long-run structural growth potential of an economy are employed as instruments: population share below the age of 14, the fertility rate, the openness, the labour force participation rate, unlit labour costs, the debt GDP level and a dummy for a general election.

¹⁹ The results for the government balance are also plausible: A high level of the balance supports optimism whereas (not very robustly) an improvement in the balance dampens consumer sentiment which could be associated with the negative impact of tax increases or expenditure cuts on sentiment.

Table 6: Drivers of business confidence (dependent variable: change of standardized business confidence, BUSCONFST)

	(1)	(2)	(3)	(4)
BCONFST (-1)	-0.95 (0.06)***	-0.97 (0.06)***	-0.98 (0.06)***	-0.96 (0.06)***
GROWTH	35.70 (4.71)***	31.80 (4.25)***	34.93 (4.37)***	45.08 (4.71)***
Δ UNEMPLOYMENT	-0.16 (0.10)	-0.24 (0.09)***	-0.20 (0.09)**	-0.13 (0.09)
INFLATION	-0.05 (0.03)	-0.05 (0.03)*	-0.04 (0.03)	-0.05 (0.03)*
NLGXQA	-0.011 (0.033)	-0.005 (0.03)	-0.002 (0.03)	0.009 (0.03)
Δ NLGXQA	-0.026 (0.052)	-0.04 (0.05)	-0.04 (0.05)	-0.04 (0.06)
Δ WEOLABOUR	2.74 (4.06)	-	-	-
Δ WEOPRODUCT	-	2.95 (1.83)	-	-
Δ WEOFINANCE	-	-	0.36 (0.57)	-
Δ WEOTAX	-	-	-	9.22 (2.89)***
nb. of observations/nb. countries	195/16	209/18	228/17	205/16
R-squared	0.66	0.66	0.64	0.69

Fixed effects, instrumental variable regression; instruments: age share below 14, fertility rate, openness, labour force participation rate, unit labour costs, debt-GDP-level, election year dummy.

Table 7: Drivers of consumer confidence (dependent variable: change of standardized consumer confidence - CCONFST)

	(1)	(2)	(3)	(4)
CCONFST (-1)	-0.53 (0.05)***	-0.53 (0.04)***	-0.52 (0.04)***	-0.55 (0.05)***
GROWTH	22.38 (2.90)***	21.32 (2.76)***	20.84 (2.72)***	22.80 (3.05)***
Δ UNEMPLOYMENT	0.02 (0.06)	-0.002 (0.06)	-0.01 (0.05)	-0.02 (0.06)
INFLATION	-0.05 (0.01)***	-0.04 (0.01)***	-0.04 (0.01)***	-0.04 (0.01)***
NLGXQA	0.02 (0.02)	0.01 (0.02)	0.03 (0.02)*	0.06 (0.02)***
Δ NLGXQA	-0.02 (0.03)	-0.02 (0.03)	-0.04 (0.03)	-0.08 (0.04)**
Δ WEOLABOUR	0.78 (3.05)	-	-	-
Δ WEOPRODUCT	-	1.15 (1.42)	-	-
Δ WEOFINANCE	-	-	-0.33 (0.38)	-
Δ WEOTAX	-	-	-	0.23 (2.09)
nb. of observations/nb. countries	276/18	291/19	309/18	300/17
R-squared	0.46	0.46	0.44	0.46

Fixed effects, instrumental variable regression; instruments: age share below 14, fertility rate, openness, labour force participation rate, unit labour costs, debt-GDP-level, election year dummy.

6 Conclusions

Although the different analytical tools applied do not in every case lead to a uniform picture they convey a certain message concerning the extent of a possible short-run trade-off between budgetary consolidation and structural reforms.

Overall, this study shows that there are - if at all - only very limited general conflicts between fiscal prudence (“Maastricht”) and structural reforms (“Lisbon”). Judging on the experience with OECD reform processes since the mid-seventies, any such trade-off does not exist for product market reforms. There is no indication that budgets deteriorate over the reform cycle or that deficits can smooth reform processes. On the contrary, the immediate positive growth and expectation effects hint to short-run benefits which also should swiftly alleviate budgetary problems.

The result of helpful short-run growth and expectation effects also holds for tax reforms where, however, a deterioration of the budgetary balance over the reform cycle appears to be an inherent part of the reforms. Fortunately, the budgetary challenges of tax reform are alleviated by a positive short-run growth effect working through a positive impact on economic sentiment. A good budgetary initial situation is necessary (and typical) for countries trying to reduce the distorting burden of taxation. Hence, although there is a negative short-run link between tax reforms and the deficit tendencies, countries with high deficits will be unlikely to embark on tax reforms in the first place.

The results for financial market deregulation are not particularly pronounced. Positive short-run effects cannot be detected. The descriptive analysis even indicates a deterioration of business sentiment in times of financial deregulation. Only on the basis of this examination it is hard to tell whether, e.g. transitory adjustments of companies towards new capital supply structures may possibly be behind that finding.

The findings for labour market reforms are of high policy relevance since numerous EU countries still have a long way to go on this field. Here, a certain contrast exists between different analytical tools. The reform cycle analysis has brought no indication of an increasing deficit in the course of the implementation of labour market deregulation measures. However, prior to reforms social benefits tend to be slightly at an above average level. Furthermore, the estimation of the dynamic labour market reform equation show that the level and the change in the deficit tends to be positively linked to the extent of reforms and that a (almost significant) effect of increasing social benefit spending is partly behind this budgetary deterioration - lending some credibility to the compensation hypothesis.

Clearly, labour market effects do not foster business and consumer optimism in a direct and short-run way. This result is consistently found both in the reform cycle analysis (sentiment indicators and private consumption decline with reforms) and the test on direct expectation effects: In the latter labour market reforms do not result in a direct positive expectation effect as it is the case with tax and product market reforms. Obviously, economic agents do not typically perceive labour market deregulation as an institutional adjustment improving the economic perspective. This is consistent with the finding that the situation prior to labour market reforms is often characterized by favourable growth and expectation data. A good starting point allows coping with short-run negative consequences of reforms.

Generally, the results stress the fact that expectation effects should be included in any thorough exercise on reform economics. The perception of reforms can be a crucial driver of any short-term consequences for employment, growth and the budget. The finding of negative expectation effects associated with labour market reforms is likely to be one of the explanations that these reforms are particularly slow to materialize.

Finally the results as a whole point to a sometimes neglected aspect in the discussion of structural reforms and the Stability and Growth Pact: Even if certain types of reforms lead to a short-run increase in deficits, an unfavourable deficit situation makes it very unlikely that certain reforms are initiated in the first place. This underlines the necessity of effective deficit rules in the Pact in order to safeguard EU countries' future structural flexibility.

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Appendix

Table A-1: Data definitions and sources

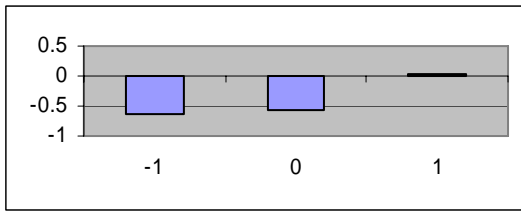
time series	description	source
NLGXQ	general government net primary lending cyclically adjusted as % trend GDP	OECD Economic Outlook database
NLGXQA	general government net primary lending as % GDP	OECD Economic Outlook database
DEBT	debt-GDP-level	OECD Economic Outlook database
YPGXQ	general government primary expenditure as % GDP	OECD Economic Outlook database
YPGXQA	general government primary expenditure cyclically adjusted as % trend GDP	OECD Economic Outlook database
SSPGQ	social security benefits paid by government as % GDP	OECD Economic Outlook database
YRGTQ	general government total revenue as % GDP	OECD Economic Outlook database
YRQA	general government total revenue cyclically adjusted as % trend GDP	OECD Economic Outlook database
TYQ	total taxes as % GDP	OECD Economic Outlook database
TYQA	total taxes cyclically adjusted ad % trend GDP	OECD Economic Outlook database
GROWTH	real growth GDP	OECD Economic Outlook database
GROWTHFDDV	real growth final domestic expenditure	OECD Economic Outlook database
OUTPUTGAP	output gap	OECD Economic Outlook database
UNEMPLOYMENT	unemployment rate	OECD Economic Outlook database
CCONFST	consumer confidence, standardized	EU Commission, national sources
SRATIO	household saving ratio	OECD Economic Outlook database
GROWTHCPV	real growth private consumption	OECD Economic Outlook database
GROWTHIHV	real growth private residential investment	OECD Economic Outlook database
BUSCONFST	business confidence, standardized	EU Commission, national sources
GROWTHIBV	real growth business investment	OECD Economic Outlook database
WEOFINANCIAL	index financial sector regulation from World Economic Outlook 2004	Helbling et al. (2004)
WEOLABOUR	index labour market regulation from World Economic Outlook 2004	Helbling et al. (2004)
WEOPRODUCT	index product market regulation from World Economic Outlook 2004	Helbling et al. (2004)
WEOTAX	index tax system distortions from World Economic Outlook 2004	Helbling et al. (2004)
INFLATION	inflation, consumer prices	World Bank: World Development Indicators
FDI	gross foreign direct investment in % GDP	World Bank: World Development Indicators
ideology dummy: left	generated from chief executive's party ideology variable	Beck et al. (2001)
ideology dummy: centre	generated from chief executive's party ideology variable	Beck et al. (2001)

Table A-2: Reform years

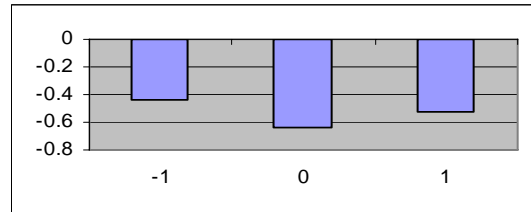
	financial market	labour market	tax system	product market
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Austria	76, 80, 82, 91	91-92	89	89
Belgium	76, 79, 82, 91	88-94		87, 93
Canada				88
Denmark	78, 81, 83, 88	85-86, 93-94	89-91	89, 93, 95, 97
Finland	84, 87, 91	87-88, 96-97	78, 87, 95, 97	93-95
France	86-87, 90-91			89
Germany		93-94		90, 96
Ireland	85-86, 92	83-84		88
Italy	84, 85, 90	96	98	93, 95
Japan	79, 92, 94	76	92, 97-99	85, 87, 90
Netherlands	76, 82-83	89-92	94, 96, 98	92-93, 96-97
New Zealand	84, 86		86-87, 90	83, 86, 89, 93
Norway	84-85, 87, 95			87, 91
Portugal	89, 91-93			86
Spain	88, 93-94, 99	83, 91-92	86, 90	97
Sweden	78, 83-84, 86, 93	88, 91-94	91, 93	92, 95
Switzerland	90			99
United Kingdom	76, 79	89-90	76-77, 83, 87, 90-92	87, 90, 93
United States	81, 87	85-86	81-83	80, 96

Figure A-1: Differences in mean financial market reforms

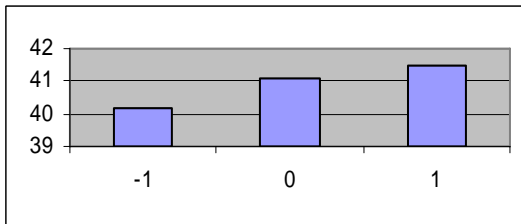
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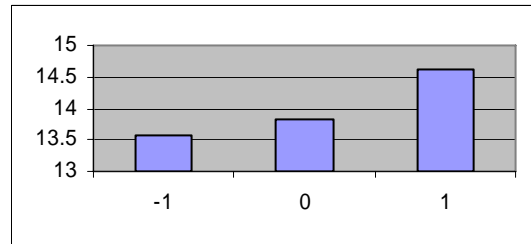
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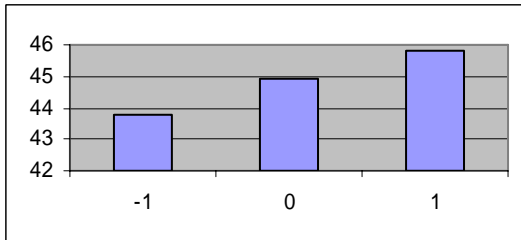
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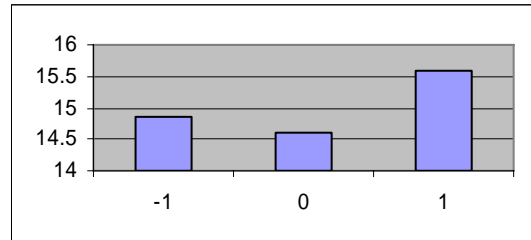
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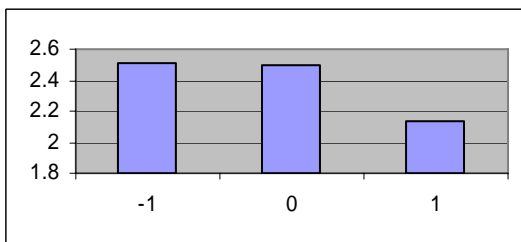
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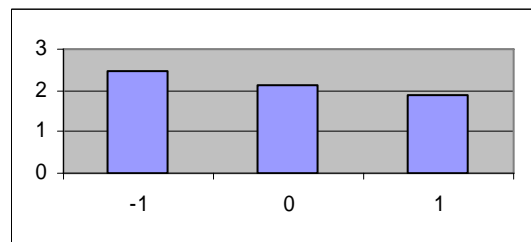
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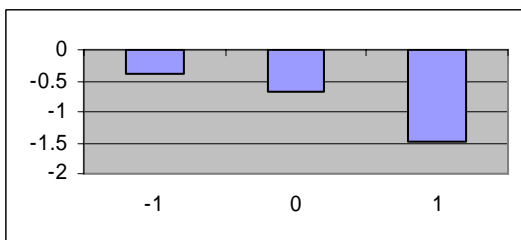
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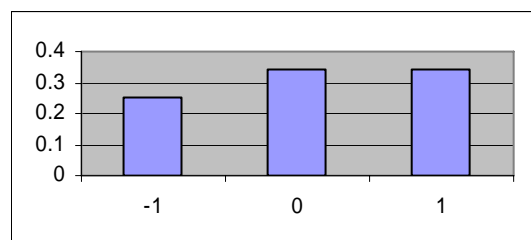
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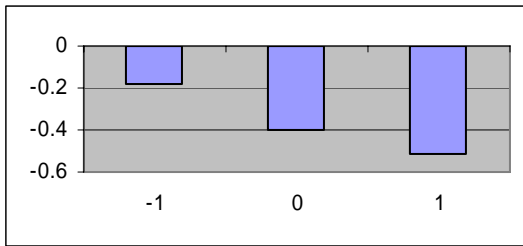
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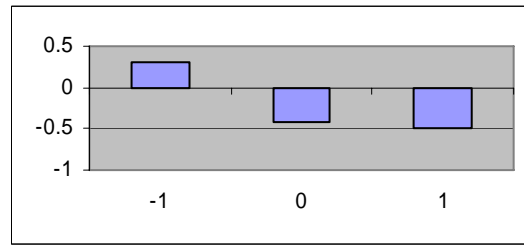
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CCONFST



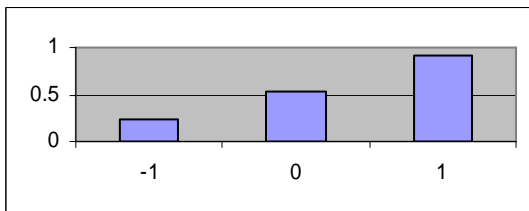
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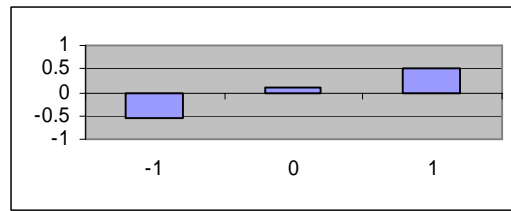
-1: two year period before reform year, 0: reform year, 1: two year period after reform year, ***/*** significance of F-tests as reported in table 3.

Figure A-2: Differences in mean labour market reforms

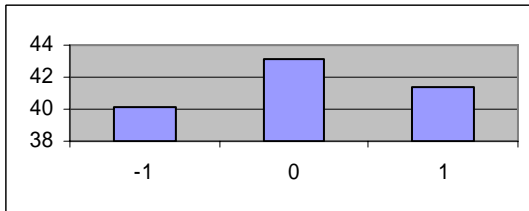
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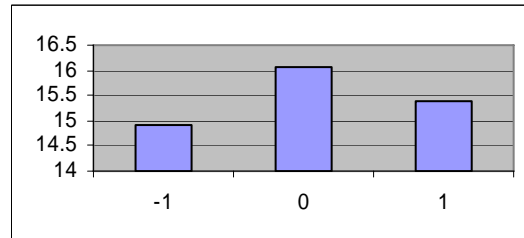
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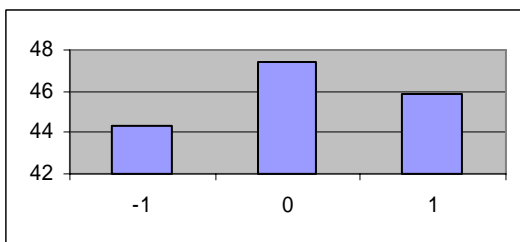
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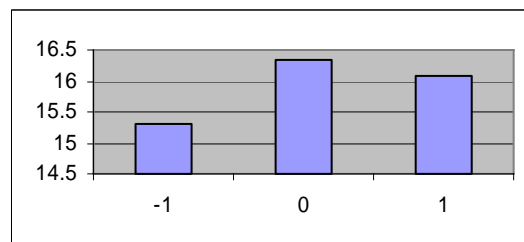
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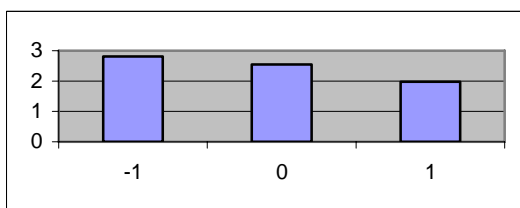
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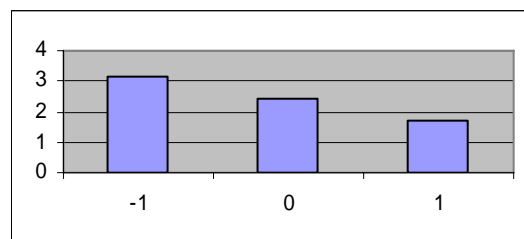
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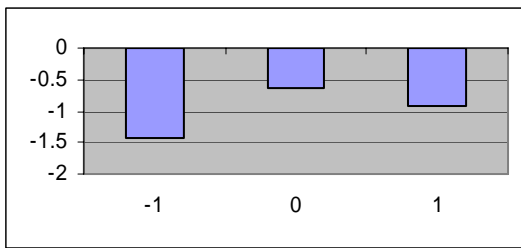
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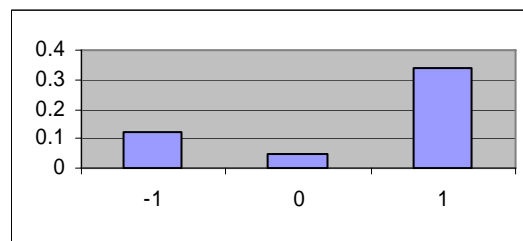
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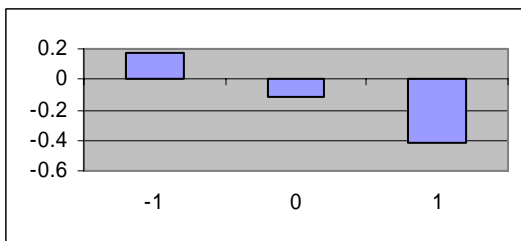
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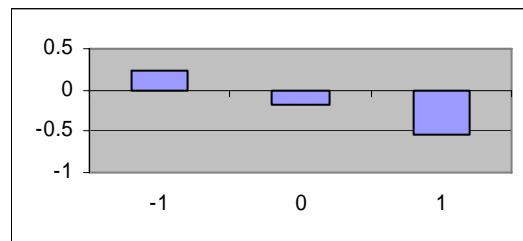
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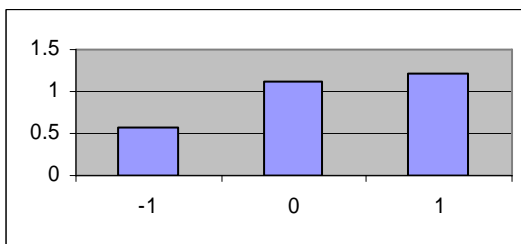
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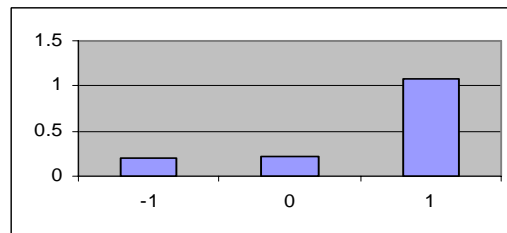
Explanations: see Figure A-1.

Figure A-3: Differences in mean product market reforms

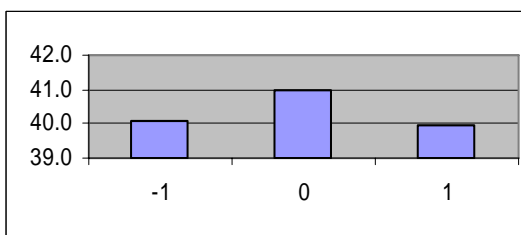
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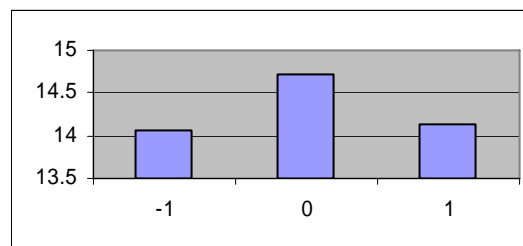
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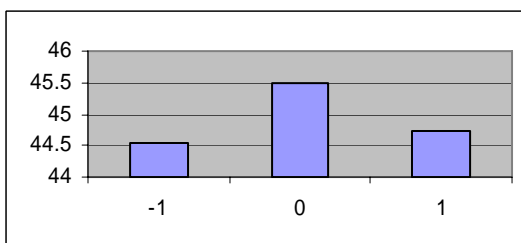
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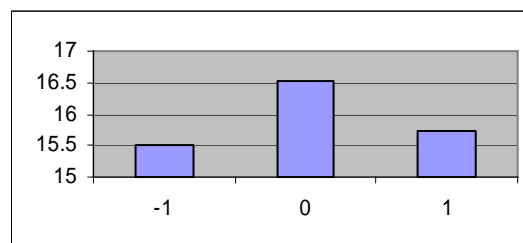
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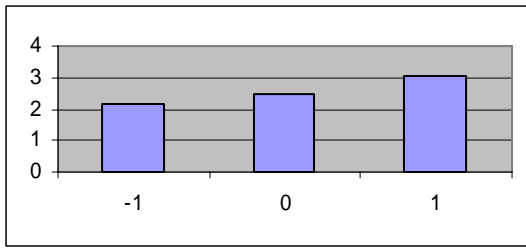
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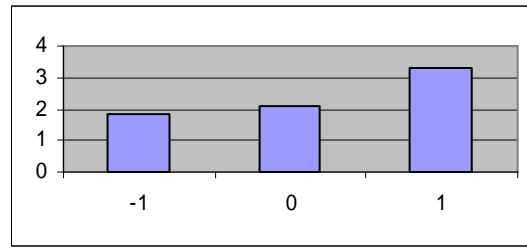
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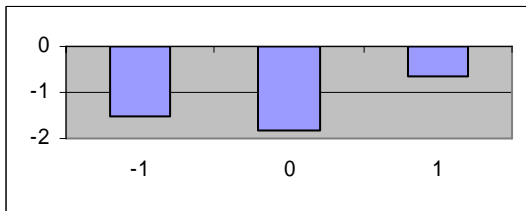
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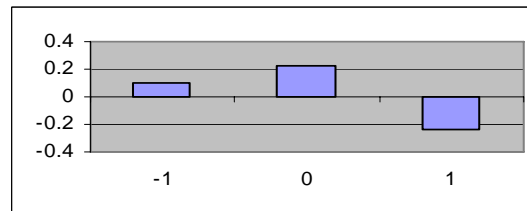
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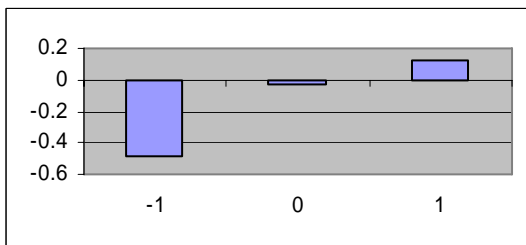
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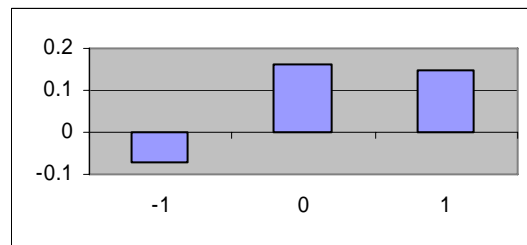
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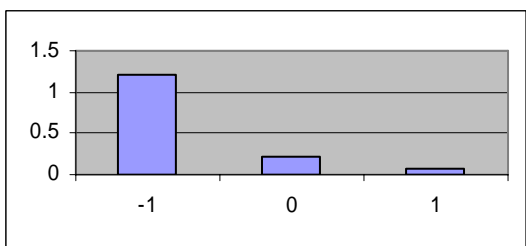
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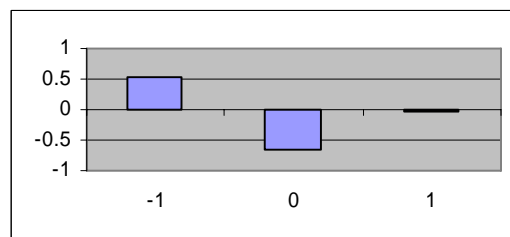
Explanations: see Figure A-1.

Figure A-4: Differences in mean tax reforms

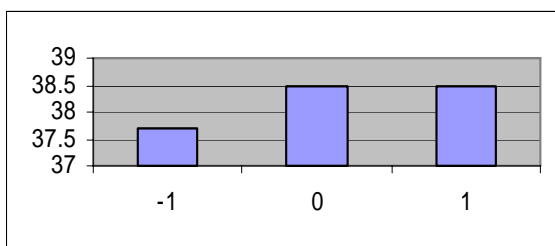
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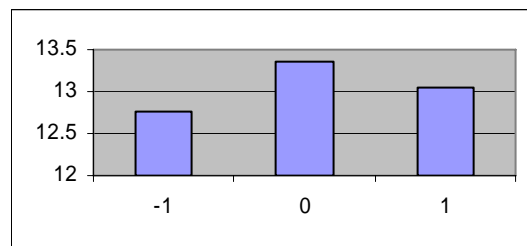
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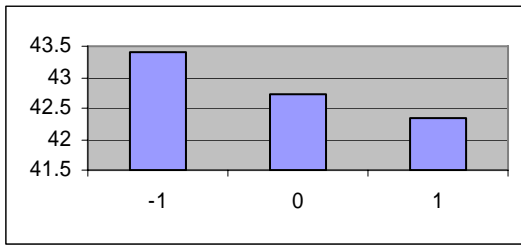
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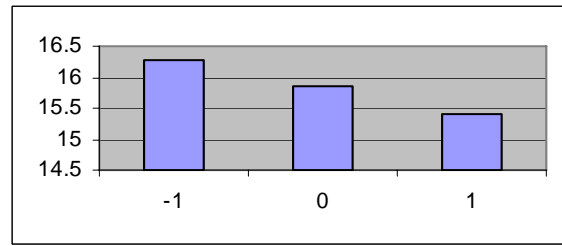
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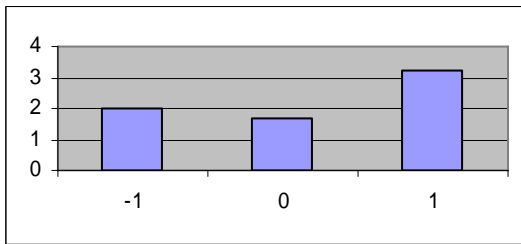
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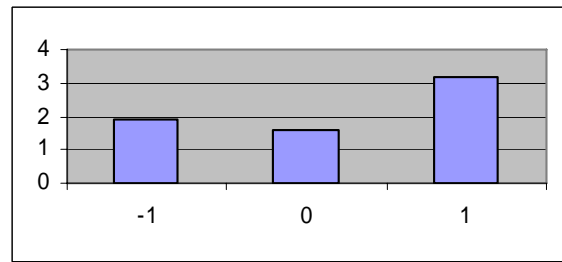
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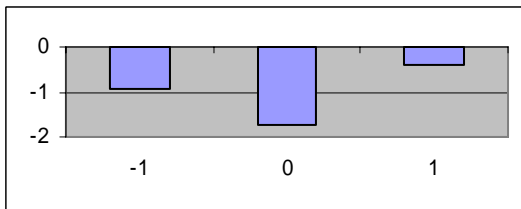
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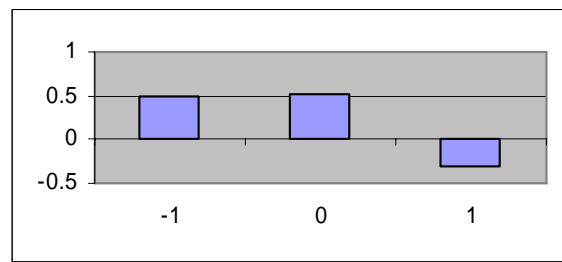
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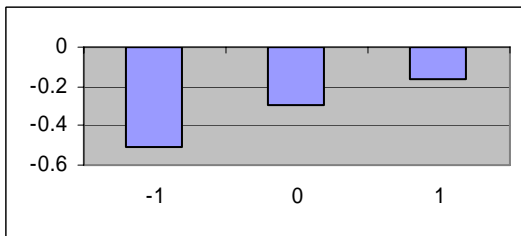
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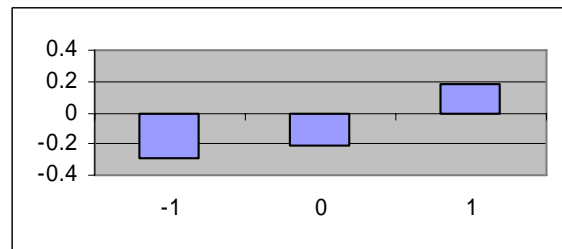
Δ UNEMPLOYMENT ***



CCONFST ***



BUSCONFST



Explanations: see Figure A-1.