Financial Theory & Practice 4/2014

DUBRAVKO MIHALJEK
Domestic bank intermediation in emerging market economies during the 2008-09 crisis

HRVOJE ŠIMOVIĆ, HELENA BLAŽIĆ and ANA ŠTAMBUK
Perspectives of tax reforms in Croatia: expert opinion survey

TINE STANOVNIK and MIROSLAV VERBIČ
Personal income tax reforms and tax progressivity in Slovenia, 1991-2012

MAGDALENA MAŁGORZATA HYBKA
Legislative proposal for a controlled foreign companies regime in Poland from an international perspective

Vol. 38, No. 4 | pp. 381-511
December 2014 | Zagreb

UDC 336
ISSN 1846-887x

Institute of Public Finance

Publisher
Institute of Public Finance, Smičiklasova 21, Zagreb, Croatia

Financial Theory and Practice is abstracted and indexed in:
DOAJ (Directory of Open Access Journals, Lund University, Sweden)
EBSCO Publishing Database
EconLit (American Economic Association's electronic database), JEL (Journal of Economic Literature, Pittsburgh, Pennsylvania, USA)
HRČAK (Portal of Scientific Journals of Croatia)
IBSS (International Bibliography of the Social Sciences, ProQuest, Cambridge, UK)
RePEc (Research Papers in Economics)

Financial Theory & Practice 4/2014

Reviewed scientific journal

Vol. 38, No. 4 | pp. 381-511 | December 2014 | Zagreb

Institute of Public Finance

HR EXCELLENCE IN RESEARCH

Financial Theory and Practice publishes scientific articles in the field of public sector economics, and also welcomes submissions of applied and theoretical research papers on a broader set of economic topics such as economic growth and development, the role of institutions, transition to the market economy and EU integration. Empirical analysis is preferably related, but not limited, to the experience of countries in Central and Eastern Europe and Southeast Europe.

Submission of papers

Submission of a paper will be held to imply that it contains original unpublished work and is not being submitted for publication elsewhere. All papers have to pass through a double blind peer-reviewing process.

Guidelines for authors can be found at www.fintp.hr.

Financial Theory and Practice is published in accordance with the highest level of professional ethics and standards. *Ethical guidelines for journal publication* can be found at www.fintp.hr.

Financial Theory & Practice 4/2014

TABLE OF CONTENTS

Articles

381 DUBRAVKO MIHALJEK
Domestic bank intermediation in emerging market economies during the 2008-09 crisis

405 HRVOJE ŠIMOVIĆ, HELENA BLAŽIĆ and ANA ŠTAMBUK
Perspectives of tax reforms in Croatia: expert opinion survey

441 TINE STANOVNIK and MIROSLAV VERBIČ
Personal income tax reforms and tax progressivity in Slovenia, 1991-2012

465 MAGDALENA MAŁGORZATA HYBKA
Legislative proposal for a controlled foreign companies regime in Poland from an international perspective

Book review

489 BORIS JOKIĆ (Ed.)
Emerging from the Shadow: A Comparative Qualitative Exploration of Private Tutoring in Eurasia *(Predrag Bejaković)*

497 List of reviewers in the period 1999-2014

507 List of articles published in “Financial Theory and Practice”, Vol. 38, 2014

511 Corrigendum

Domestic bank intermediation in emerging market economies during the 2008-09 crisis

DUBRAVKO MIHALJEK, PhD*

Article**
JEL: E44, F65, G21, G23, O57
doi: 10.3326/fintp.38.4.1

* The views expressed in this paper are those of the author and do not necessarily represent those of the Bank for International Settlements (BIS). A draft of this paper was prepared for the annual BIS Meeting of Deputy Governors from Emerging Market Economies, held in Basel in January 2010, and appeared in BIS Papers no 54, 2010; it is published here in revised form with the permission of the BIS. The author thanks Agne Subelyte for research assistance and Stephen Cecchetti, Ramon Moreno, Haibin Zhu, participants of the Deputy Governors meeting and two anonymous referees for comments.

** Received: July 10, 2014
Accepted: September 8, 2014

Dubravko MIHALJEK
Head of Macroeconomic Analysis, Bank for International Settlements, Centralbahnplatz 2, 4002 Basel, Switzerland
e-mail: dubravko.mihaljek@bis.org

Abstract

This paper analyses bank intermediation in emerging market economies (EMEs) at the height of the 2008-09 global financial crisis. The analysis is based on central bank responses to a BIS questionnaire prepared in July 2009, and thus provides a unique snapshot that can be used for studies of commercial banking activity in EMEs before and after the crisis. EME banks by and large adjusted to the crisis in ways that stabilised their financial positions. On the funding side, they reduced reliance on wholesale markets and sought to attract retail deposits. On the lending side, banks slowed new lending, shifted towards less risky loans and increased their holdings of government bonds. In an effort to boost liquidity, banks shortened the maturity of their assets, relied less on the interbank market and increased the scope of their transactions with central banks. Foreign and domestically-owned banks adjusted to the crisis in similar ways.

Keywords: emerging market economies, global financial crisis, bank intermediation, bank business models, domestic- and foreign-owned banks

1 INTRODUCTION

Emerging market economies were significantly affected by the 2008-09 global financial crisis. Nevertheless, compared with their experience in previous crises, EMEs generally displayed resilience. The peak period of stress in EME financial markets was also comparatively limited, with severe pressures in the aftermath of the Lehman Brothers bankruptcy in mid-September 2008, and improved stability and signs of recovery starting in the third quarter of 2009.

Around this time – more precisely in July 2009 – the Bank for International Settlements (BIS) sent a comprehensive questionnaire to over 20 major EME central banks, asking them about the key aspects of domestic bank intermediation during the crisis: changes in bank business models (funding, lending, liquidity operations) and how foreign-owned banks' responses compared with those of home-owned banks.[1] The analysis in this paper is based entirely on the responses to this questionnaire and subsequent discussions among Deputy Governors from EME central banks in January 2010. The paper thus provides a unique snapshot of EME commercial banking activity at the peak of the global financial crisis. As central banks provided their own preferred data series, no attempt was made to extend the analysis to the period after 2009. Rather, the purpose here is to provide a simple analytical insight into this rare crisis experience, which can then be used by researchers studying banking in EMEs before and after the global financial crisis.[2]

[1] The discussion refers to 21 EMEs from Asia (China, Hong Kong SAR, India, Korea, Malaysia, the Philippines, Singapore, Thailand); Latin America (Argentina, Brazil, Chile, Colombia, Mexico, Peru); emerging Europe (the Czech Republic, Hungary, Poland, Turkey); the Middle East (Israel, Saudi Arabia); and South Africa.

[2] Country-specific experiences are discussed in Al-Hamidy (2010), Babicky (2010), Banai et al. (2010), Bank of Israel (2010), Guinigundo (2010), Ibrahim (2010), Kozinski (2010), and South African Reserve Bank (2010).

The main finding is that, despite the great variety of financial intermediation and bank ownership structures in EMEs, by and large, banks adjusted to the crisis as in a textbook scenario. On the funding side, they reduced their reliance on wholesale markets and increased their efforts to attract retail deposits. On the lending side, they reduced the growth of new loans to firms and households, shifted towards less risky types of loans and increased their holdings of government bonds. On the liquidity side, banks shortened the maturity of their assets, relied less on the interbank market and started doing more business with central banks.

Foreign and domestic banks broadly adjusted to the crisis in the same way. Initially, there were some differences in the speed of adjustment, but by end-2009 both domestic and foreign banks moved in the same direction and adjusted their funding, lending and liquidity operations to a similar extent. The funding model seems to have mattered more for adjustment than bank ownership.

This paper is divided into four sections. Section 2 reviews the structure of financial intermediation in EMEs. Section 3 analyses the structure of bank funding before and during the 2008-09 crisis. Section 4 looks at changes in bank lending patterns. Section 5 evaluates domestic and foreign-owned bank responses at the peak of the crisis and discusses the incentives for establishing subsidiaries versus branches after the crisis. Section 6 concludes.

2 STRUCTURE OF FINANCIAL INTERMEDIATION IN EMEs

To understand how banks in different EMEs reacted at the peak of the crisis, it is useful to start by analysing the structure of domestic financial intermediation. The relative importance of banks differs greatly both within and among emerging market regions. This section looks at the relative size of banks, non-bank financial institutions (NBFIs), equity markets and bond markets in EMEs; the ownership structure of domestic banking systems; and the legal form of incorporation of foreign banks' affiliates (i.e., subsidiaries vs. branches). Each of these elements is potentially relevant for explaining the observed trends in financial intermediation at the peak of the crisis.

For instance, banks were generally more affected than NBFIs by the crisis so, other things being equal, one would expect countries with larger non-bank financial sectors to have experienced fewer disruptions in domestic financial intermediation. Similarly, one would expect countries with more developed domestic bond markets to have experienced less financial market upheaval than those relying mostly on international bond markets.

Regarding the ownership structure, one view is that problems in international banks' domestic markets (i.e., US, UK, German, French, etc. markets) inevitably led those banks to withdraw from EMEs. A classic example is the large-scale withdrawal of Japanese banks from emerging Asia during the 1997-98 crisis.

When Japanese banks experienced problems in their domestic market as a result of declines in equity and real estate prices, they had to shrink their balance sheets to maintain their capital adequacy requirements. The resulting pullback provided a major impetus to the crisis that was unfolding in emerging Asia at the time.

A competing view is that international banks consider some emerging markets of strategic importance for their overall business strategy. Therefore, it is in their vital interest to support operations in these markets during the crisis (de Haas and Lelyveld, 2004; EBRD, 2009). The case in point is banks from smaller western European countries (e.g., Austria, Belgium) that established a dense network of subsidiaries in central and eastern Europe (CEE). These subsidiaries generated the lion's share of profits at the group level in the second half of the 2000s, and were therefore vitally important for the financial performance of parent banks.

Yet another view is that in crisis periods lending by state-owned banks tends to be less procyclical than lending by foreign and private domestic banks. For instance, during the crises in emerging Asia and Latin America in the 1990s, state-owned banks expanded credit faster (or cut credit to a smaller extent) than domestic and foreign-owned private banks (Hawkins and Mihaljek, 2001). A similar experience was reported in some EMEs during the current crisis.

Finally, the legal form of incorporation of foreign banks' affiliates may matter during a crisis. Foreign bank affiliates are often of small importance from the parent banks' perspective, but systemically important for the host country. One issue that arises in this context is how the host country authorities might deal with the loss of liquidity and disruptions in the domestic payment system if the parent institution decides to cut back support for such an affiliate. Other things being equal, one would expect the authorities in countries where foreign banks are present as subsidiaries to be better equipped to preserve liquidity and stability, because subsidiaries are standalone entities with their own capital and are supervised by both host country supervisor and, on a consolidated basis, by the parent's supervisory authority.

2.1 BANKS VERSUS OTHER FINANCIAL INTERMEDIARIES

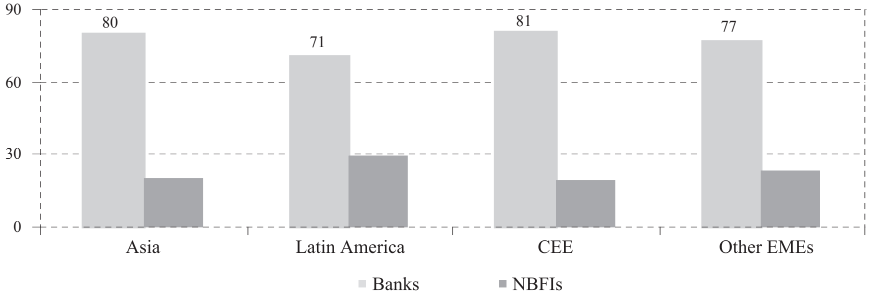
Banks in EMEs were much larger than NBFIs on the eve of the crisis and accounted, on average, for 70-80% of total financial sector assets in 2007 (graph 1).[3] However, there were large differences across countries. In Latin America, for instance, the share of banks in the combined assets of banks and NBFIs ranged from around 50% (Chile and Colombia) to 98% (Argentina), while in other EMEs it ranged from 65% (Israel, Korea, Malaysia) to 95% or higher (Hong Kong SAR, the Philippines, South Africa).

[3] Unless otherwise noted, regional figures in the text, graphs and tables refer to simple averages of countries in a region. These are: China, Hong Kong SAR, India, Korea, Malaysia, the Philippines, Singapore and Thailand (emerging Asia); Argentina, Brazil, Chile, Colombia, Mexico and Peru (Latin America); the Czech Republic, Hungary, Poland and Turkey (CEE); and Israel, Saudi Arabia and South Africa (other EMEs).

The relative shares of banks and NBFIs remained stable through 2009. However, there were some exceptions: banks in India and Peru increased their share of total assets by 7 percentage points (pp) between 2006 and 2009; and in Hungary and Poland by 3-4 pp. Banks retreated compared to NBFIs on a larger scale only in Israel (by 5 pp), Colombia (3 pp) and Mexico (2 pp).

Graph 1

Banks vs. NBFIs, as a percentage of total financial sector assets, 2007



Source: Central bank questionnaires.

Differences in the structure of financial intermediation were even larger when stock and bond markets are considered. At end-2007, when EMEs were still unaffected by the crisis, stock market capitalisation was close to or higher than the local GDP in more than half of EMEs in our sample of 21 countries (table 1). Stock markets were also larger than the local banking system – in some cases two–three times so – in Chile, Colombia, Hong Kong SAR, India, Peru, Saudi Arabia, Singapore and South Africa. Many countries, including Brazil, the Czech Republic, Hungary and emerging Asian economies, also had fairly large local bond markets, ranging in size from 50% to over 100% of local GDP. Overall, countries in emerging Asia stood out in terms of the size and diversity of their financial systems, followed by Israel, Chile, South Africa, Brazil, central European countries and Saudi Arabia (table 1).

These data suggest that many EMEs were not quite "emerging" in terms of the size and diversity of their financial sectors. Although the crisis had a huge impact on stock markets in many EMEs – equity prices fell by 20-40% between end-2007 and end-2009 – other segments of EMEs' financial sectors were unaffected or else expanded.

The data in table 1 also show that the financial sectors of the majority of EMEs could not be characterised as bank-centred: NBFIs, equity and bond markets matched or exceeded the size of the local banking sector in many countries. A comprehensive assessment of the impact of the crisis on financial intermediation in EMEs would therefore need to go beyond the narrow banking sector, on which the rest of this paper will focus.

FINANCIAL THEORY AND PRACTICE
38 (4) 381-404 (2014)

Table 1
Structure of financial intermediation, 2007, as a percentage of GDP

	Banking system assets	NBFIs' assets	Stock market capitalisation	Domestic bonds outstanding	Total
Emerging Asia					
Singapore	656	108	308	58	1,131
Hong Kong SAR	641	38	800	25	1,504
China	210	–	–	50	260
Malaysia	206	110	26	85	427
Korea	160	94	98	103	455
Thailand	131	47	79	57	313
India	83	62	157	42	345
Latin America					
Chile	102	98	131	26	357
Brazil	101	23	95	71	290
Mexico	44	19	39	34	135
Argentina	36	1	22	29	88
Peru	33	32	97	21	
Central and eastern Europe					
Hungary	108	24	80	56	267
Czech Republic	106	37	27	60	230
Poland	71	36	92	38	236
Turkey	69	10	40	34	153
Other EMEs					
Israel	148	112	110	34	404
South Africa	127	6	150	43	327
Saudi Arabia	75	–	135	–	210

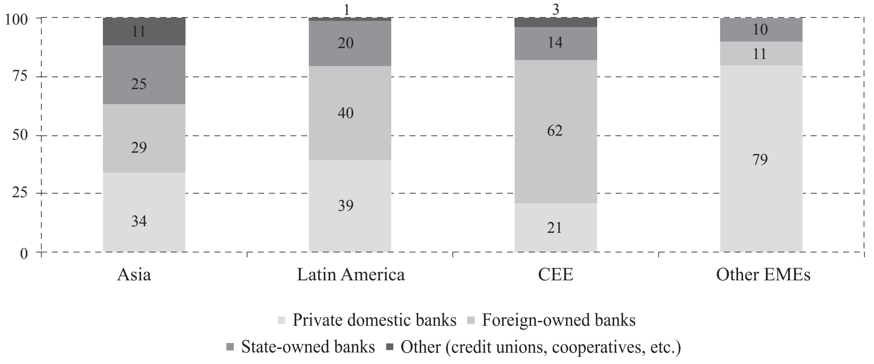
Source: Central bank questionnaires.

2.2 OWNERSHIP STRUCTURE OF BANKS

EMEs differed considerably in terms of the ownership structure of their banks. Banking systems in Asia had, on average, a fairly balanced ownership structure (graph 2). Compared to other emerging market regions, Asia also stood out in terms of the relative importance of state-owned banks and other banking institutions (cooperative banks, credit unions, etc.). However, this was mainly due to the large size of the state and cooperative sectors in China and India. In Latin America, foreign and private domestic banks each accounted for about 40% of banking system assets, and state-owned banks for the remaining 20%. In CEE, foreign-owned banks dominated, accounting for over 60% of total banking system assets on average, and often much more in individual countries. In other EMEs – Israel, Saudi Arabia and South Africa – private domestic banks were dominant, accounting for 80% of total assets, with the remainder split between foreign and state-owned banks.

GRAPH 2

Ownership structure of emerging market banks, 2009, as a percentage of total banking system assets



Source: Central bank questionnaires.

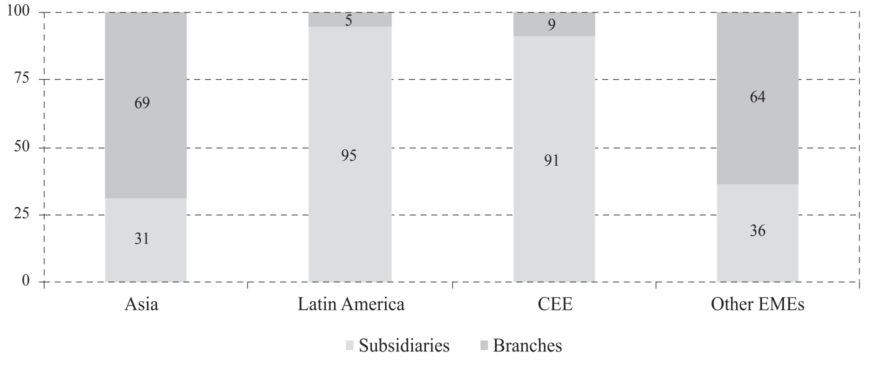
Again, regional averages masked considerable country differences. With the exception of the Czech Republic and Saudi Arabia, where foreign and private domestic banks accounted for, respectively, 96% and 98% of total banking system assets, different forms of ownership were well represented in almost all EMEs. For instance, private domestic banks accounted for more than 50% of total assets in Brazil, Colombia, Israel, Malaysia, Peru, the Philippines, South Africa, Thailand and Turkey, and foreign-owned banks accounted for more than 50% of total assets in Hong Kong SAR, Hungary, Mexico, Peru, Poland and Singapore (appendix graph A1). State-owned banks had a strong presence (more than 30% of total assets) in Argentina, Brazil, China, India and Korea. The ownership structure of banks in EMEs remained fairly stable through 2009. This contrasts with developments in earlier financial crises affecting EMEs, when major changes were taking place in the structure of the banking industry (see Mihaljek, 2006; Turner, 2008).

Regarding the legal form of foreign banks' presence in EMEs, subsidiaries were dominant in Latin America and CEE, while branches accounted for about two thirds of foreign banks' assets in Asia and other EMEs (graph 3). In Colombia, Malaysia, Mexico and Peru, foreign banks operate only as subsidiaries, while in China, India, Saudi Arabia and South Africa they operate only as branches. Unlike the overall ownership structure, the legal form of foreign banks' operations has changed in several EMEs: from 2006 to 2009, the relative share of branches increased by 15 pp in Korea, 8 pp in Hungary, 4 pp in Israel and 3 pp in Poland. But in Chile and South Africa, the subsidiaries' shares increased by over 6 pp.

FINANCIAL THEORY AND PRACTICE
38 (4) 381-404 (2014)

Graph 3

Foreign bank subsidiaries and branches, 2009, as a percentage of total assets of foreign banks' affiliates



Source: Central bank questionnaires.

3 BANK FUNDING

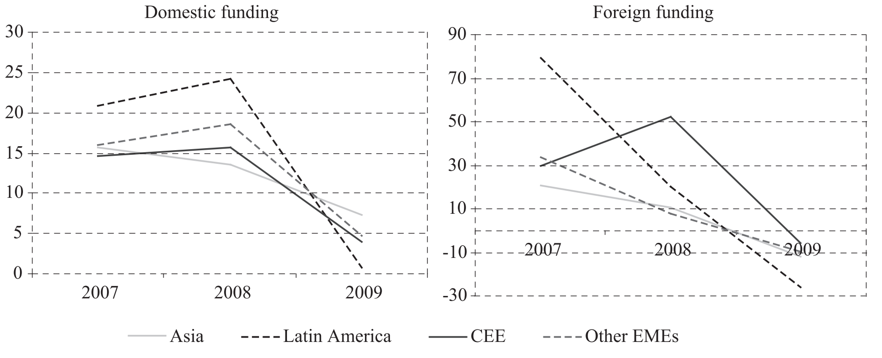
In the run-up to the 2008-09 crisis, the funding of banks in EMEs was characterised by two main trends: first, domestic deposits were generally growing more slowly than bank lending, resulting in rising loan to deposit ratios; and second, banks in EMEs were increasingly relying on foreign sources in order to fund the rapid expansion of credit. These trends were particularly pronounced in CEE, parts of Latin America, South Africa and Korea.

With the onset of the crisis in October 2008, both domestic and foreign sources of bank funding in EMEs largely evaporated. Growth rates of domestic funding plunged from 15-25% year-on-year in 2007-08, to 0-7% in 2009 (graph 4, left-hand panel). The retrenchment in foreign funding was even more dramatic, especially in Latin America and CEE (right-hand panel). The banking systems in virtually all EMEs recorded negative growth of foreign funding for the full year 2009.

Among domestic sources of funding – borrowing from other domestic financial institutions and bonds and money market instruments issued by banks in domestic markets – both deposit growth and market-based funding slowed sharply in 2009 (graph 5). This is not surprising in view of the severity of the real and financial shocks that hit the EMEs in the first half of 2009: the collapse in exports depressed the growth of customer deposits (left-hand panel), while disruptions in local interbank and securities markets led to the sharp fall in domestic market funding (right-hand panel). During the second half of 2009, as global and local financial markets gradually recovered, banks in several Asian countries, including China, India, the Philippines and Thailand, started again to issue securities in domestic markets, mostly short-term money market instruments.

Graph 4

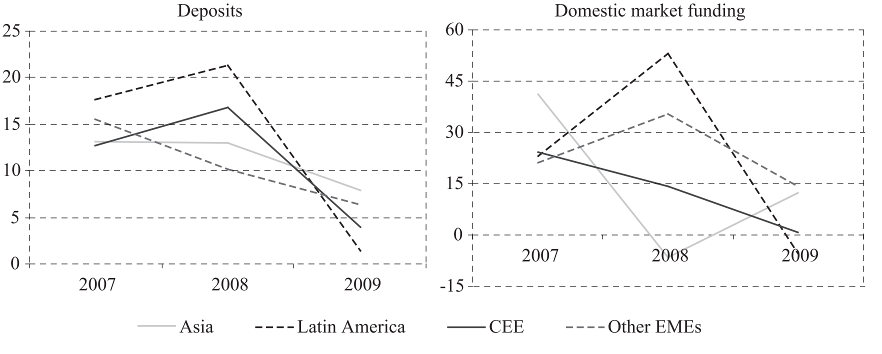
Funding of emerging market banks, year-on-year growth rates, in per cent



Source: Central bank questionnaires.

Graph 5

Domestic funding, year-on-year growth rates, in per cent



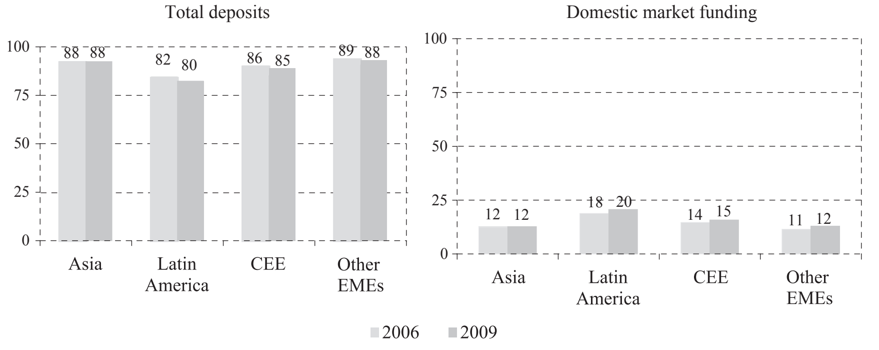
Source: Central bank questionnaires.

In relative terms, the shock to deposits was generally stronger than that to domestic funding. As indicated in graph 6, the share of deposits in domestic liabilities decreased in all emerging market regions with the exception of Asia, while the share of domestic money and bond market funding was slightly higher in three out of four regions in 2009 than in 2006.

The situation with foreign funding was similar. Short-term liabilities plunged everywhere in 2009, recording average growth rates from -10% to -40% year-on-year (graph 7, left-hand panel). Long-term liabilities dropped precipitously in CEE, where banks had for years relied on longer-term funding provided by international banks, and in Latin America, especially Brazil and Chile (right-hand panel). Long-term liabilities increased modestly only in emerging Asia. These developments reflected disruptions in global money markets on the one hand, and a temporary halt in cross-border credit flows to EMEs on the other.

Graph 6

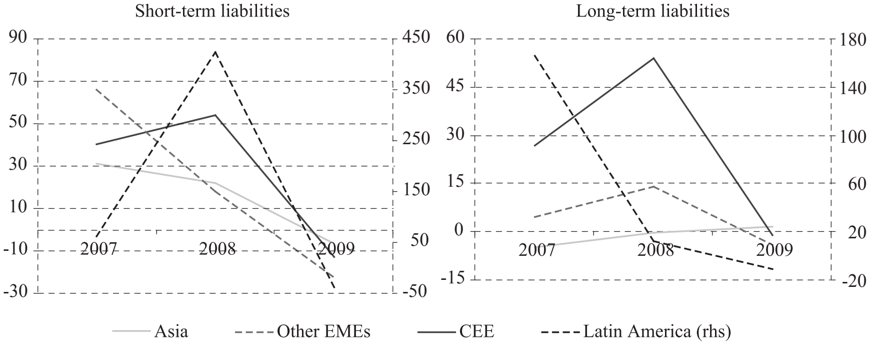
Composition of domestic funding, as a percentage of domestic liabilities



Source: Central bank questionnaires.

Graph 7

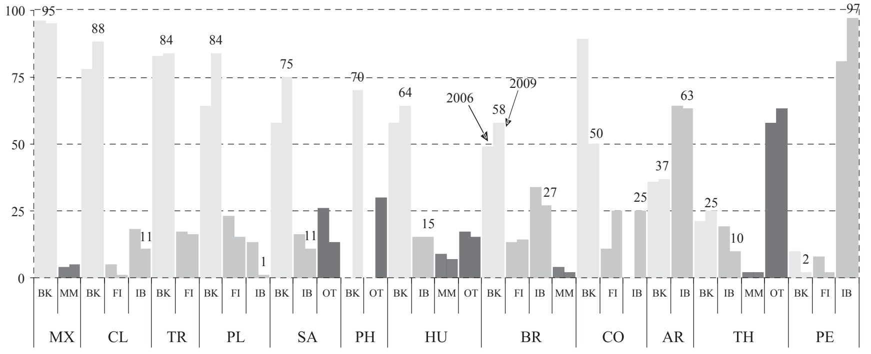
Foreign funding, year-on-year growth rates, in per cent (both left- and right-hand sides)



Source: Central bank questionnaires.

Disturbances in the international money and bond markets seem to have had a bigger impact on the composition of foreign funding than disruptions in cross-border bank flows. As indicated in graph 8, with the exception of Colombia, Mexico and Peru, the share of cross-border bank funding in total foreign liabilities was still higher in 2009 than in 2006, while the share of international money market instruments and bonds issued by EME banks was generally lower (Peru was a notable exception in bond issuance). The funding of EME banks by other foreign financial institutions – as well as from other foreign sources – was lower as a percentage of foreign liabilities in almost all the countries in 2009 compared with 2006.

Graph 8
Composition of foreign funding, as a percentage of foreign liabilities



Note: BK = cross-border loans provided by foreign banks; FI = loans provided by other foreign financial institutions; MM = international money market instruments issued by emerging market banks; IB = international bonds issued by emerging market banks; OT = other sources of foreign funding.

Source: Central bank questionnaires.

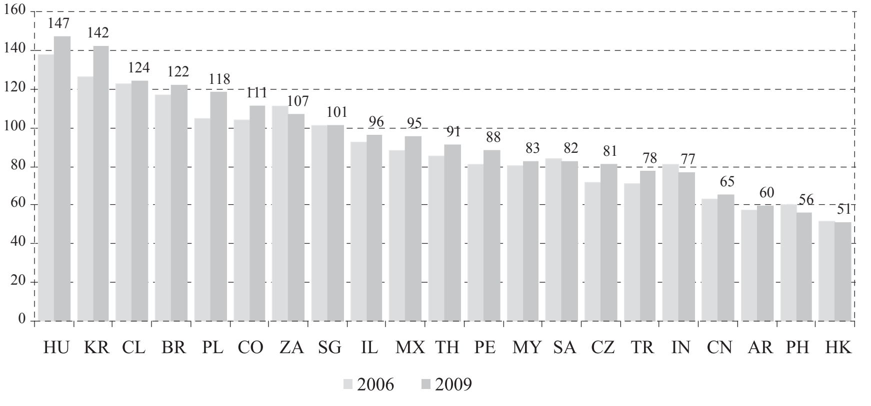
Central banks clearly identified problems in domestic and foreign funding in their contributions to the BIS meeting of Deputy Governors of emerging market economies. For instance, Brazilian banks often turn to international banks for credit lines for exporters. Their access to export credit lines was significantly restrained for some time during the crisis, prompting the central bank to provide a trade credit facility to banks until the access to foreign sources of credit gradually resumed.

In Mexico, some smaller- and medium-sized banks launched aggressive campaigns to increase funding from retail depositors by offering very attractive interest rates, while others expanded their branch networks. Some Mexican banks also increased the proportion of liabilities held as liquid assets, while others called back some assets and reduced their lending commitments as a temporary measure to get through the crisis. Competition for deposits also strengthened in Hong Kong SAR, Korea and Hungary. In Poland, banks replaced maturing domestic interbank exposures with borrowing from foreign banks (mainly parent companies), and made efforts to raise more stable domestic sources such as deposits from non-financial clients (mainly households). This was, however, accompanied by a "deposit price war" that negatively affected banks' financing costs and increased pressure on their interest margins.

Despite evidence of funding pressures in a large number of EMEs, many central banks felt that the financial crisis had no major impact on the funding strategies of banks operating in their domestic market. The main reason for this was that many emerging market banks did not rely extensively on either domestic or foreign market funding – they generally had a sufficient pool of local deposits to fund loans to their clients. As shown in graph 9, roughly two thirds of EMEs in our sample had loan-to-deposit ratios below 100% in 2009, despite a widespread increase in these ratios since 2006. Another reason was that local interbank markets by and large continued to function normally through the crisis – although, admittedly, these markets were not as important a source of liquidity as in advanced economies.

Graph 9

Loan to deposit ratios[1], in per cent



[1] *Total loans as a percentage of total deposits. For Singapore, domestic banks only.*

Sources: Central bank questionnaires; BIS calculations.

Another source of funding – the securitisation of bank loans – was also affected by the crisis. In most EMEs, securitisation was not widespread, but plans for its development were well-advanced in some countries prior to the crisis. In India, securitisation was mostly based on retail loans and was not too complex. With the crisis, securitisation decreased in volume, but was expected to resume in the future. In China, there were several pilot programmes for the securitisation of bank loans. However, with loan-to-deposit ratios of around 60%, the motivation for securitisation was relatively low. The central bank nevertheless promoted the development of a legal infrastructure and regulatory framework for securitisation because of concerns that banks might start moving riskier loans off their balance sheets by selling them to trust companies; these had already been in trouble several times in the previous decade because of investments that were too risky. In Saudi Arabia, the authorities were approached by the banking industry on the issue of securitisation prior to the crisis. However, with bank loans already growing at annual rates of more than 25%, the Saudi Arabian Monetary Authority decided that it was not in the interest of financial stability to provide a further boost to credit growth by developing a framework for securitisation. By contrast, the authorities in South Africa gave a push to securitisation by lowering the loan-to-value ratio for mortgage loans during the crisis.

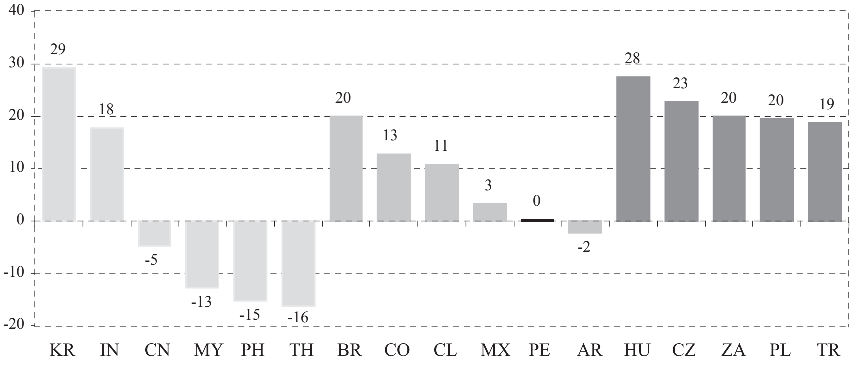
4 BANK LENDING

Before the crisis spread from advanced to emerging market economies in October 2008, private sector credit had expanded rapidly in most EMEs. The expansion was particularly pronounced in CEE, Brazil, Chile, Korea and South Africa. Credit stagnated or decreased as a percentage of GDP only in a few Asian and Latin American economies (graph 10).

The great credit expansion resulted from a combination of cyclical, structural and policy factors that were in place from 2002 onwards. Low real interest rates and the strong growth of the global economy were the key cyclical factors. Rapid financial sector development and growing economic and financial integration of EMEs with advanced economies were the major structural forces. More disciplined macroeconomic policies and greater emphasis on financial stability in EMEs were also contributing elements. Together, these factors provided incentives for portfolio diversification by global investors and led to a surge in capital flows to EMEs, which funded much of the credit expansion (Mihaljek, 2009). In addition, the balance sheets of commercial banks in some EMEs with fixed exchange rates expanded as a result of prolonged foreign exchange intervention by central banks resisting currency appreciation.

Graph 10

Domestic bank credit to the private sector, end-2002 to August 2008, cumulative change in end-period stocks, as a percentage of GDP



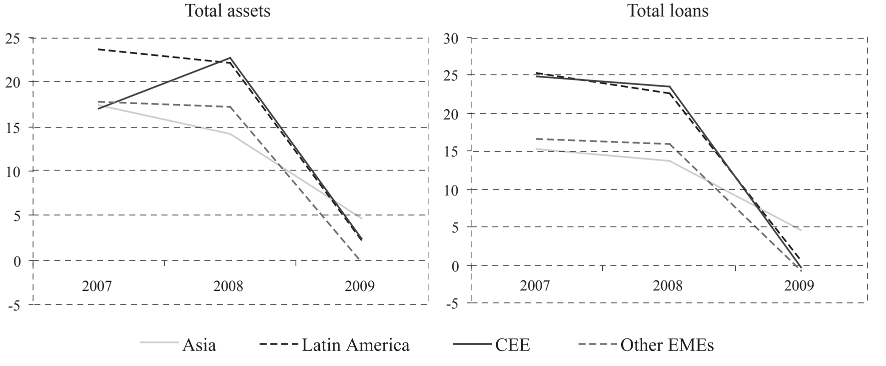
Source: IMF, 2014.

Following the onset of the crisis in the main financial centres in August 2007, the growth of total bank assets and loans began to slow down in most EMEs (graph 11). As the crisis spread in October 2008, credit growth decelerated sharply. Apart from some Asian and Latin American countries, most EMEs recorded negative credit growth rates in 2009. It is striking, for instance, how similar the average rate of decline was in CEE and Latin America (right-hand panel).

FINANCIAL THEORY AND PRACTICE
38 (4) 381-404 (2014)

GRAPH 11

Total assets and loans of banks in EMEs, year-on-year growth rates, in per cent

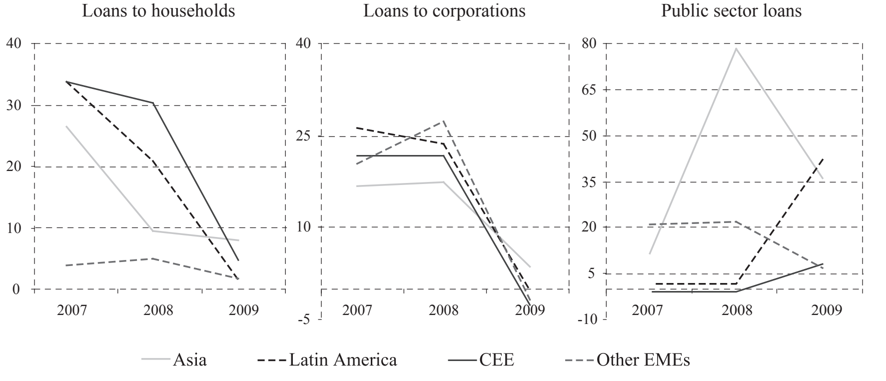


Source: Central bank questionnaires.

Corporate credit growth decelerated sharply in all emerging market regions in 2009 (graph 12, centre panel). The slowdown in household lending was pronounced in CEE and Latin America, and more moderate in Asia and other EMEs (left-hand panel). Lending to the public sector increased in CEE, and in particular in Latin America, while in Asia and other EMEs, public sector lending decreased (right-hand panel).

GRAPH 12

Domestic credit growth, year-on-year growth rates, in per cent

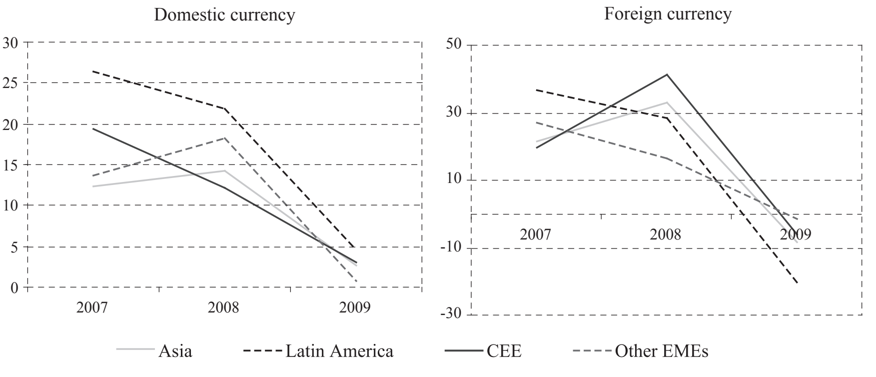


Source: Central bank questionnaires.

In terms of the currency composition of loans, foreign currency loans decreased much faster than domestic currency loans in 2009 (graph 13). While the rates of decrease across regions were quite similar in 2009, it is interesting to note that foreign currency lending in CEE *increased* during 2008, despite the ongoing crisis in many western European countries, where most banks operating in CEE have headquarters. As a result, foreign currency loans accounted for about 35% of total outstanding domestic bank credit in CEE in 2009, compared with 15-18% in other emerging market regions. This was a major source of vulnerability during the crisis, especially since a quarter of foreign currency loans were taken by households, which in most cases do not have foreign currency income and cannot hedge exchange rate risk due to the lack of hedging instruments. One should note, however, that foreign currency lending was more a question of banking product development than a problem of currency substitution induced by macroeconomic instability, although some macroeconomic developments did play a role in the spread of foreign currency lending, including fiscal deficits in Hungary, which kept domestic interest rates high.

Graph 13

Domestic and foreign currency loans, year-on-year growth rates, in per cent



Source: Central bank questionnaires.

There were also some significant changes in the composition of bank assets other than loans. Holdings of long-term securities fell sharply in CEE and Latin America, and increased in Asia and other EMEs in 2009 (appendix graph A2, left-hand panel). In CEE, the reduction in long-term bond holdings was limited to domestic corporate and government bonds, while foreign bond holdings increased sharply (appendix graph A3). Banks in Asia and other EMEs also increased their foreign bond holdings in 2009. In addition, banks in most EMEs increased their holdings of short-term securities (appendix graph A2, right-hand panel).

Central bank contributions to the meeting of EME Deputy Governors provided further detail on these developments. In Hungary, India, Korea, Singapore, South Africa, Thailand and Turkey, credit growth slowed sharply as credit demand fell and banks tightened their credit standards and price and non-price credit terms. In Argentina and the Philippines, the composition of domestic credit shifted from the household sector before the crisis towards the corporate sector in 2009. In South

Africa, in contrast, corporate lending decreased more than loans to households due to a sharp contraction in output. China was an important exception: the growth rate of total loans doubled in 2009 to 30% year-on-year by end-October.

Banks in several countries (including Brazil, the Czech Republic and South Africa) shortened the maturity of lending and often voluntarily increased their holdings of statutory liquid assets. This was also the case with commercial banks in India and Turkey, which significantly increased their holdings of government securities. In Korea, banks expanded their short-term placements in money market funds.

In Poland, there was a significant disruption of the domestic interbank deposit market. In response, banks limited the growth of credit to the economy (especially the non-financial corporate sector), raised the share of highly marketable treasury securities in their assets, and increased holdings of central bank bills and deposits at the central bank.

5 DOMESTIC VERSUS FOREIGN-OWNED BANKS

Reflecting the diversity of ownership forms and market positions of banks in EMEs, the responses of domestic and foreign-owned banks to the crisis have been quite varied and cannot be easily categorised.

A number of central banks in countries with both low and high shares of foreign bank ownership (e.g., Brazil, Hong Kong SAR, Korea, Malaysia, Saudi Arabia, Singapore and Thailand) reported that there were no major differences in the reactions of domestic and foreign-owned banks during the crisis. For instance, South Africa's largest foreign-owned bank (which is the second largest bank in the country) responded to the crisis like the domestic banks. In Thailand, both foreign and local banks became more cautious in lending to risky businesses (especially small- and medium-sized enterprises, which was also the case in Korea); and reduced their off-balance sheet transactions, especially in foreign currency derivatives. The main difference was that foreign-owned banks reduced household loans and increased secured lending slightly, while the Thai banks increased household loans and kept secured lending unchanged.

Similarly, in Hong Kong SAR, both local and overseas banks cut back loans to the corporate and household sectors sharply after the onset of the crisis. One difference was that locally incorporated banks were more aggressive in securing stable funding in the retail market by offering more attractive time deposit rates. In Singapore, some foreign banks cut back lending to non-core customers and complex trading activities as part of restructuring measures undertaken by parent banks worldwide. Overall, however, these cutbacks were not significant. In Saudi Arabia, liquidity from head offices decreased temporarily for some foreign bank branches, which restricted their usual role in interbank funding and lending to various sectors in the economy. Nevertheless, one foreign bank branch was able to issue an Islamic bond (sukuk) to fund its Saudi assets during the crisis.

Among the countries with a moderate share of foreign-owned banks (i.e., 15-30% of total banking sector assets), foreign-owned banks generally reduced domestic credit faster than private domestic banks, for instance in Argentina, Turkey, and among smaller foreign banks in South Africa. Similarly, foreign-owned banks in Colombia were quite procyclical in consumer lending. In Argentina and Turkey, the decline in credit by the private banks – both foreign and domestic – was partly offset by increased lending by the state-owned banks.

The funding responses of private domestic banks and foreign-owned banks also differed in some countries. In Turkey, for instance, foreign-owned banks reduced interbank borrowing much more than private domestic banks (this was also the case in the Philippines), and issued subordinated debt to offset the decline in cross-border loans. Foreign-owned banks also significantly increased the amount of funds raised from repo transactions, while the private domestic banks reduced their funding through repos.

It is interesting to note that reactions to the crisis differed even among some foreign-owned banks. In South Africa, smaller foreign-owned banks whose parents were more exposed to the global financial turmoil were cut off from head office funding and had to reduce their exposures to the corporate sector. If the news about their foreign owners was bad, they tried to emphasise how they were delinked and independent; if the news was good, they stressed the willingness of their parents to stand by them.

Among the countries where foreign-owned banks play a key role in domestic financial intermediation, the question of domestic versus foreign-owned banks was less relevant than the question whether foreign banks helped to maintain financial stability through the crisis. On this issue, experiences varied. In Mexico, some subsidiaries – especially those whose parents were in trouble – initially reduced credit faster than other banks, although later on, domestic banks also cut back their lending. Many foreign-owned banks in Mexico ended up lending to parent banks.[4] Some parent banks also transferred loans to large Mexican firms from the books of the head office to the books of the subsidiaries in order to reduce the head office leverage. Foreign bank subsidiaries also reduced their risk positions and trading activity in the foreign exchange and sovereign debt markets.

In contrast to the situation in Mexico, in Hungary parent banks fulfilled their support function during the crisis, showing no signs of withdrawing funds from their subsidiaries. In addition to stabilising the position of subsidiaries, parent banks

[4] This was also the case in some central European countries – in particular the Czech Republic and Slovakia – in the last quarter of 2008 and the first quarter of 2009 (see Mihaljek, 2010).

provided them with foreign currency funding and increased the role of intragroup foreign currency swaps. On the other hand, domestically owned banks received government loans to strengthen their liquidity position during the crisis, and the central bank provided foreign currency liquidity under its swap facility. Both local and foreign-owned banks reduced their profit targets for 2009, started competing for deposits, and cut back loans to risky industries such as construction.

The experience of Poland was somewhere between these extremes. Foreign-owned banks generally reduced corporate credit and expanded household credit faster than Polish-owned banks. They kept on providing foreign currency loans (though at a much diminished rate), while Polish-owned banks largely stopped providing such loans, replacing them with local currency loans. Foreign-owned banks also closed their liquidity funding gap faster than domestically owned banks. In particular, at the height of the crisis in Q4 2008, foreign-owned banks withdrew earlier than domestic banks from the interbank market, preferring to deal with the central bank rather than with other commercial banks. This lack of confidence was "imported" from the outside: parent banks apparently instructed their Polish subsidiaries to withdraw from the local interbank market. But, on the whole, parent banks did not abandon their subsidiaries in Poland or elsewhere in CEE during the crisis. They broadly maintained their cross-border credit lines and lending in domestic currency, thus acting as a stabilising force during the crisis and demonstrating that these markets were of strategic importance to them (see Mihaljek, 2010).

A related issue is whether parent banks will convert some of their emerging market subsidiaries into branches after the crisis. Over the past decade, centralisation of the decision-making process in global financial institutions has led to a system in which subsidiaries operate more or less like branches. In the European Union, this development has been facilitated by the adoption of the single EU banking passport.

Branch banking was often attractive to host country authorities in the past because it seemed to provide greater incentives to foreign banks to transfer know-how and technology to EMEs. With the crisis, however, the focus of host country authorities has shifted towards financial stability issues. This has made subsidiaries more attractive for some host countries because of the possibility of ring-fencing their assets and of regulating them more tightly than branches. In response, some foreign banks considered at the time the possibility of turning their subsidiaries into branches if the local regulation of subsidiaries' activities increased significantly after the crisis.

However, there has also been a movement away from foreign bank branches in some countries. In China, the authorities expressed an interest in expanding the role of foreign-owned banks – which were at the time present only as branches –

to subsidiaries in the future. One reason for this was the high concentration of some activities in foreign bank branches: with just 2% of total banking system assets, foreign bank branches accounted for 50% of derivatives and 18% of foreign currency trading before the crisis. Another was the desire to encourage foreign-owned banks to lend and fund their activities in China in the future. Malaysia had some positive experience with this approach – by requiring foreign banks to operate as subsidiaries, the authorities ensured that banks had a level playing field and entered the crisis with sufficient capital. By contrast, the authorities in India were reluctant to grant foreign banks the full national treatment given to domestic banks, out of concern that foreign banks could come to dominate some market segments.

In summary, in many EMEs where foreign-owned banks do not play a key role in domestic financial intermediation, the differences in the reactions of local and foreign-owned banks at the peak of the crisis were small and discernible mainly in the details of their funding and lending operations. In particular, there were no noticeable changes in the composition of the loan portfolios of the two groups of banks at the peak of the crisis. In EMEs where foreign banks played a somewhat bigger role they generally adjusted their balance sheets faster and more deeply than domestic banks. Finally, in EMEs where foreign-owned banks were the dominant financial intermediaries, reactions to the crisis depended on the exposure of parent institutions, the financial health of subsidiaries, and the strategic importance of subsidiaries for parent banks. In the end, financial stability was preserved both in those EMEs where parent banks fulfilled their support function and in those where they withdrew funds from subsidiaries. However, the latter often required some extraordinary efforts on the part of central banks to stabilise the local financial markets.

6 CONCLUSION

This paper analysed a unique data set on the behaviour of EME banks at the peak of the crisis in 2008-09. The data were provided by 21 emerging market central banks to the BIS in late 2009, and as such represent a useful benchmark for studies of EME banking activity before and after the global financial crisis.

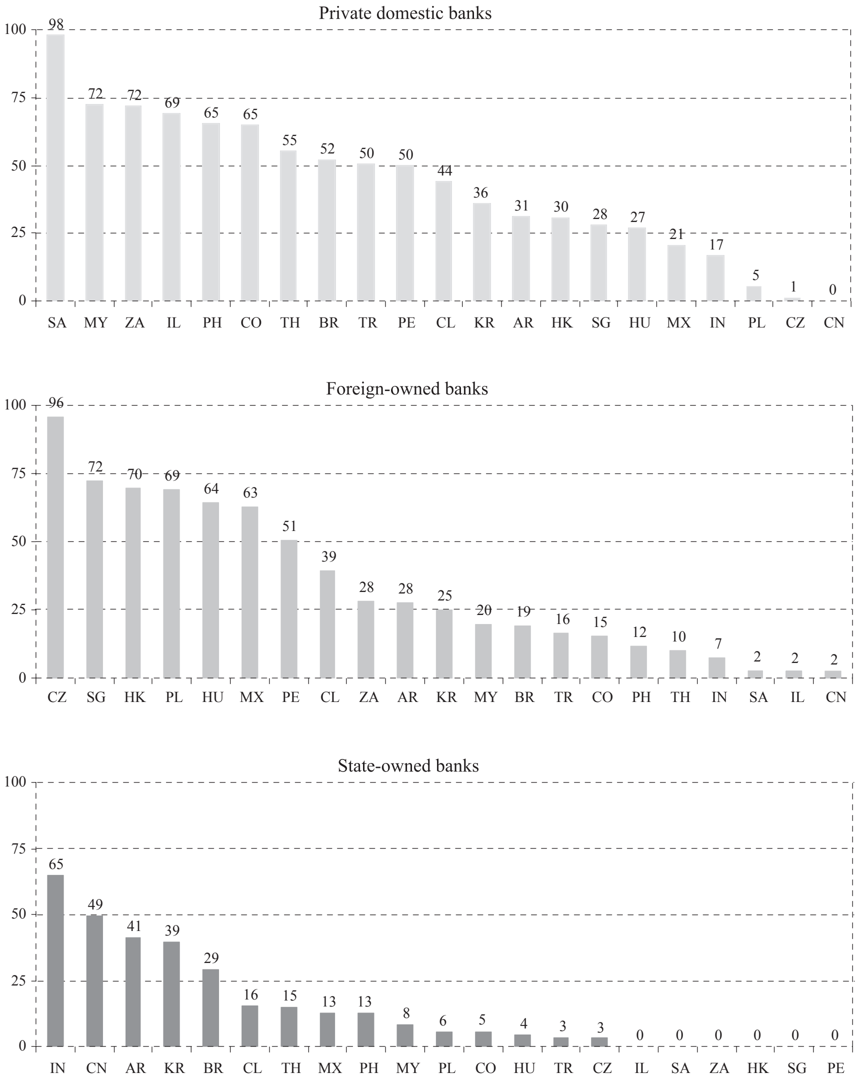
At the height of the crisis, EME banks clearly sought to stabilise their financial position: on the funding side, they borrowed less in wholesale markets and started attracting retail deposits; on the lending side, they reduced new loans to firms and households, shifted towards less risky loans, and increased their holdings of government bonds. In an effort to boost liquidity, banks shortened the maturity of their assets, relied less on the interbank market and increased the scope of their transactions with central banks. The differences in the reactions of local and foreign-owned banks at the peak of the crisis were generally small and depended on the relative size of foreign-owned banks and exposure of parent institutions.

FINANCIAL THEORY AND PRACTICE
38 (4) 381-404 (2014)

Subsequent developments have shown that the sharp decline in credit growth bottomed out in most major EMEs during 2010. Owing to resilient economies and strong domestic demand, the rebound in banking activity in emerging Asia and Latin America was quite pronounced through mid-2012. In emerging Europe, the rebound was more subdued in this period (with the exception of Turkey), reflecting spillovers from the sovereign debt crisis in the euro area. Since mid-2012, credit growth has slowed in emerging Asia and Latin America, as central banks took measures to address the signs of overheating. Within a relatively short period of four to five years, banking activity in EMEs has thus experienced a full cycle – from the peak in 2007-08, to the trough in the first half of 2009, to another peak in mid-2012 – demonstrating considerable resilience and stability along the way. In particular, no major EME bank has failed or posed a systemic risk in this period.

Graph A1

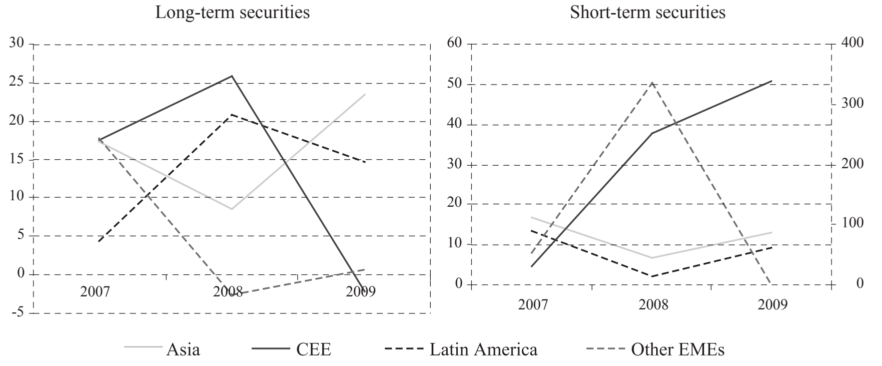
Ownership structure of banking systems in EMEs, 2009, as a percentage of total banking system assets



Source: Central bank questionnaires.

Graph A2

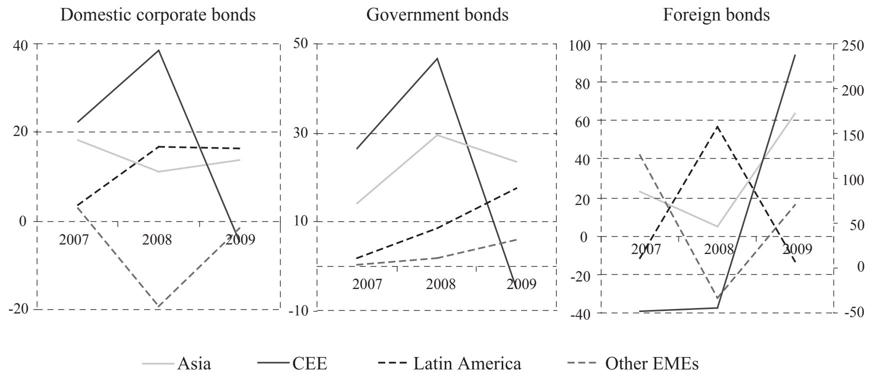
Holdings of securities by banks in emerging markets, year-on-year growth rates, in per cent (both left- and right-hand sides)



Source: Central bank questionnaires.

Graph A3

Holdings of long-term securities by banks in emerging markets, year-on-year growth rates, in per cent (both left- and right-hand sides)



Source: Central bank questionnaires.

REFERENCES

1. Al-Hamidy, A, 2010. The global financial crisis: impact on Saudi Arabia. *BIS Papers,* No. 54, pp. 37-357. Available at: [http://www.bis.org/publ/bppdf/bispap54u.pdf].
2. Banai, A., Király, J. and Nagy, M., 2010. The demise of the halcyon days in Hungary: foreign and local banks before and after the crisis. *BIS Papers,* No. 54, pp. 195-224. Available at: [http://www.bis.org/publ/bppdf/bispap54l.pdf].
3. Babicky, V., 2010. The international banking crisis and domestic financial intermediation in the Czech Republic. *BIS Papers,* No. 54, pp. 171-179. Available at: [http://www.bis.org/publ/bppdf/bispap54j.pdf].
4. Bank of Israel, 2010. Domestic bank intermediation: domestically owned versus foreign-owned banks. *BIS Papers,* No. 54, pp. 235-256. Available at: [http://www.bis.org/publ/bppdf/bispap54n.pdf].
5. EBRD, 2009. *Transition report 2009: Transition in crisis?* London: EBRD.
6. De Haas, R. and Lelyveld, I., 2004. Foreign bank penetration and private sector credit in central and eastern Europe. *Journal of Emerging Market Finance*, 3 (2), pp. 125-151. doi: 10.1177/097265270400300203
7. Guinigundo, D., 2010. The impact of the global financial crisis on the Philippine financial system: an assessment. *BIS Papers,* No. 54, pp. 317-342. Available at: [http://www.bis.org/publ/bppdf/bispap54s.pdf].
8. Hawkins, J. and Mihaljek, D., 2001. The banking industry in the emerging market economies: competition, consolidation and systemic stability: an overview. *BIS Papers,* No. 4, pp. 1-44. Available at: [http://www.bis.org/publ/bppdf/bispap04a.pdf].
9. IMF, 2014. *International Financial Statistics.* Washington: International Monetary Fund.
10. Ibrahim, M., 2010. The international banking crisis and domestic financial intermediation in Malaysia. *BIS Papers,* No. 54. Available at: [http://www.bis.org/publ/bppdf/bispap54t.pdf].
11. Kozinski, W., 2010. The international banking crisis and domestic financial intermediation in Poland. *BIS Papers,* No. 54, pp. 343-346. Available at: [http://www.bis.org/publ/bppdf/bispap54t.pdf].
12. Mihaljek, D., 2006. Privatisation, consolidation and the increased role of foreign banks. *BIS Papers,* No. 28, pp. 41-66. Available at: [http://www.bis.org/publ/bppdf/bispap28c.pdf].
13. Mihaljek, D., 2009. The financial stability implications of increased capital flows for emerging market economies. *BIS Papers,* No. 44, pp. 11-44. Available at: [http://www.bis.org/publ/bppdf/bispap44b.pdf].
14. Mihaljek, D., 2010. The spread of the financial crisis to central and eastern Europe: evidence from the BIS data in: R. Matousek, ed. *Money, Banking and Financial Markets in Central and Eastern Europe.* London: Palgrave Macmillan.

15. Sinha, A., 2010. The international banking crisis and domestic financial intermediation in India. *BIS Papers,* No. 54, pp. 225-234. Available at: [http://www.bis.org/publ/bppdf/bispap54.pdf].
16. South African Reserve Bank, 2010. The international banking crisis and domestic financial intermediation in emerging economies: issues for South Africa. *BIS Papers,* No. 54, pp. 365-376. Available at: [http://www.bis.org/publ/bppdf/bispap54w.pdf].
17. Turner, P., 2008. Banking consolidation in the emerging market economies: foreign and domestic in *Competition in the financial sector: proceedings of a G20 workshop.* Jakarta: Bank Indonesia, pp. 113-114.

Perspectives of tax reforms in Croatia: expert opinion survey

HRVOJE ŠIMOVIĆ, PhD*
HELENA BLAŽIĆ, PhD*
ANA ŠTAMBUK, PhD*

Article**
JEL: H20
doi: 10.3326/fintp.38.4.2

* The authors would like to thank three anonymous referees and all participants of Session 1B at the conference "Tax Reforms: Experiences and Perspectives" for their useful comments and suggestions.
This work has been supported in part by the Croatian Science Foundation under project number IP-2013-11-8174 and in part by the University of Rijeka under project number 13.02.1.2.02.

** Received: May 19, 2014
Accepted: September 22, 2014

A previous version of this paper was presented at the conference *Tax Reforms: Experiences and Perspectives* organized by the Institute of Public Finance, Faculty of Economics and Business, Zagreb and Faculty of Economics, Rijeka in Zagreb on June 20, 2014.

Hrvoje ŠIMOVIĆ
University of Zagreb, Faculty of Economics and Business, J. F. Kennedy 6, 10000 Zagreb, Croatia
e-mail: hsimovic@efzg.hr

Helena BLAŽIĆ
University of Rijeka, Faculty of Economics, Ivana Filipovića 4, 51000 Rijeka, Croatia
e-mail: helena@efri.hr

Ana ŠTAMBUK
University of Rijeka, Faculty of Economics, Ivana Filipovića 4, 51000 Rijeka, Croatia
e-mail: ana@efri.hr

Abstract

In order to shape tax reform it is necessary objectively to assess the current state-of-the-art of and of the outlook for the tax system. After having reviewed all previous reforms in the light of the consumption-based (interest-adjusted) concept of direct taxation, which was almost systematically implemented in Croatia in 1994, we present the results of a broad expert opinion survey about the Croatian tax system. The most interesting results suggest the maintenance/(re)introduction of different tax incentives and reduced VAT rates, rejection of a flat tax as well as decrease of tax brackets, an increase in alcohol and tobacco duties, the introduction of a financial activities tax, a further shift from income to consumption, a decrease of the tax share in GDP and a belief in the behavioral responsiveness of tax decreases/exemptions, as well as a firm commitment to the principle of equity. The last three economic views/values are important predictors of other tax attitudes.

Keywords: opinion survey, tax reform, tax system, tax policy, Croatia

1 INTRODUCTION

In the summer of 2013 a *Survey about State and Perspectives of the Croatian Tax System* (Šimović et al., 2013) was conducted. The survey was based on a similar US survey from the beginning of 2013, organized by the National Tax Association (NTA) and ran among its members. This survey is referred and compared to previous similar US surveys from 1994 and 1934 (Lim et al., 2013).

The purpose of our research, like that of the US survey, was to find out what tax experts think about the overall current situation and problems in the Croatian tax system and what they expect from tax policy in the future. Since similar research has never been done in Croatia, the analysis is especially directed towards income versus consumption as the tax base, which has influenced all Croatian tax reforms. Besides that, there are some other motivations behind such an investigation. Croatia has witnessed two relatively turbulent decades and some very influential tax reforms. Above all, the research was begun in order to establish the attitudes of tax experts almost 20 years after the fundamental tax reform in 1994, when consumption-based taxation (interest-adjusted personal and corporate income tax) was introduced. Furthermore, apart from Greece, Croatia is the only EU country that is still in (5 year) recession with no positive expectations even in 2014. The decline in economic activity is causing additional political instability, changes to the system of taxation as well as changes in attitudes to the tax system and policy.

As in the US survey, our survey encompasses three sectors of experts: government, private and academic. The results are assessed using the percentage of negative/positive answers of 61% as degree of consensus and analyzing that degree of consensus in more detail. We also wanted to analyze the possible influence of specific values and economic views on tax system/policy attitudes using binomial probit regression.

After the introduction, the second part of the paper gives a short overview of Croatian tax reforms, with a special emphasis on changes related to the main taxation concepts of direct taxation (income versus consumption). In the third part, the tax survey is analyzed giving an overview of the attitudes and outlining the prevailing consensus among Croatian tax experts. The fourth part entails binomial probit regressions in order to determine how specific values and economic views (concerning behavioral responsiveness as well as incidence) influence experts' policy opinions.

2 TAX REFORMS IN CROATIA

In 2014, Croatia will mark 20 years from the first big tax reform, which set up foundations of the current tax system to a great extent. The tax system from 1994 was in the spotlight of the numerous debates in the Croatian as well as international tax literature.[1] At that time, Croatia was the only country consistently implementing consumption-based taxation – interest-adjusted personal and corporate income tax[2] (PIT and CIT). According to that, special contribution to the debate was influenced by the Allowance for Corporate Equity (ACE) tax (called "protective interest" in Croatia). In addition to corporate income tax, Croatia introduced "synthetic" personal income tax that in some elements still departed from the interest-adjusted income tax (the treatment of income from real estate) but included "protective interest" for business income (self-employed) also. In 1994 new excise taxes were also introduced, and the number of retail sales tax rates was gradually reduced in order to prepare for the introduction of value added tax (VAT). Although the first VAT law was enacted in 1995, it only entered into force in 1998.

However, Croatia relatively quickly abandoned interest-adjusted personal and corporate income tax in its second great tax reform from 2001, which followed after parliamentary elections and a change in the party in power. The biggest changes happened in the field of corporate and personal income tax, where ACE was abandoned and numerous incentives introduced. Personal income tax started to encompass some capital incomes, but the main part of them was still exempt. Apart from introduction of the General Tax Act, there were no substantial changes

[1] For the literature overview of the debates and arguments about the consumption versus income concept of taxing personal and corporate income in Croatia see Šimović (2012: 10-11), for the general literature overview about the advantages and disadvantages of consumption-based taxation, especially ACE tax, see Blažić (2006: 67-68). For contributions to the debate, and especially concerning the Croatian ACE model 1994-2000, see Schmidt et al. (1996), Rose and Wiswesser (1998), Keen and King (2002), Klemm (2007) and Blažić (2008).

[2] The term "corporate income tax" used in this paper for the reasons of international comparability, would not be completely appropriate for Croatia. The tax payers of this tax are corporations, but also parts of the non-corporate sector (partnerships with "trader status" and even sole traders). In this way the typical distortion of the classical income tax concept – between the corporate and the non-corporate sector – was avoided, as the consumption tax concept requires, and this remains even now. On the other hand, it could be argued that it is simply replaced by the distortion between business units (enterprises) that pay corporate income tax and business units that pay personal income tax (self-employed in "crafts and trades" that are relatively small or do not want to opt to pay a corporate income tax). In order to mitigate the problem, the Croatian legislation has from the very beginning given the self-employed the option of paying corporate income tax instead of personal income tax – the self-employed can opt to pay corporate income tax or have to pay it if the business is big enough in terms of number of employees, assets, income or turnover (see also Blažić, 2008).

in other tax forms. It could be said that this tax reform shapes in a substantial way the present characteristics of the Croatian tax system as *modus operandi* of the tax system and policy, which are changed with every change of the ruling party.[3] So, the "mini" tax reform at the beginning of 2005 abolished the taxation of dividends again (which was reintroduced in 2012), but did not bring back ACE as the basic element of consumption-based taxation at the entire business (corporate and personal – self-employed) level. The current Croatian tax system is a hybrid system, where both the elements of income-based and consumption-based taxation concept are present and where the domination of the particular concept depends mostly on the current ruling party.

Table 1

Overview of tax reforms and changes in the tax system relevant for the income/consumption concept

Period and system	Basic changes
1994-2000 Consumption-based system (interest-adjusted PIT and CIT)	**1994** – Non-taxation of capital income (exception: property income) – ACE (at CIT and PIT for business income)
2001-2004 Mostly income-based system (with some of consumption-based elements: savings and interest-adjusted PIT and CIT)	**2001** – Introduction of capital income taxation (dividends and part of interest) – Abolishment of ACE and introduction of numerous incentives (tax holidays) Elements of consumption concept: interest-adjusted income tax – Non taxation of most interest (bank saving and deposit accounts, securities) and capital gains from financial assets – Some dual income tax elements retained (linear taxation of most capital/property income by the way of final withholding tax) Elements of consumption concept: saving-adjusted income tax and cash-flow tax – Not only compulsory, but also voluntary pensions as well as life insurance contributions deductible (and later taxable) – Immediate write-off and enhanced accelerated depreciation
2005-2013 Hybrid system – elements of income-based and consumption-based taxation (interest-adjusted and saving-adjusted)	**2005 "Mini" tax reform** – Abolition of dividend taxation – Abolition of immediate write-off and enhanced accelerated depreciation (the accelerated depreciation in the form of doubled depreciation rates from before 2007 remains) – Modifications of CIT incentives **2010** – Abolition of deductibility for voluntary pension insurance and life insurance premiums (from saving-adjusted to interest-adjusted model) **2012** – Reintroduction of dividend taxation (towards the income concept, but not systematically) – Non-taxation of reinvested profit

Source: Authors.

[3] In contrast to the tax reform from 1994, that of 2001 did not cause nearly as much debate. Although it was shown that this reform brought about a significant decrease in the tax burden, it remained questionable whether the results of the changes were the original intention of tax policy creators (Švaljek, 2005).

An overview of tax reforms in Croatia with special emphasis on the changes in direction to either the consumption or the income concept is presented in table 1.

3 2013 EXPERT OPINION SURVEY ABOUT TAX POLICY IN CROATIA

3.1 SURVEY METHODOLOGY

Opinion/attitude surveys, either rather general[4] or more specific[5] have been applied in taxation research. The Croatian survey is mostly based on the latest US NTA expert opinion survey (Lim et al., 2013; DeGroat, 2013), which has a long history behind it (Walker, 1935; Slemrod, 1994; Brannon, 1995). However, a lot of modifications had to be made, with the majority of new questions introduced as well as a lot of questions omitted/changed. The 92 questions (i.e., statements) combine general issues and questions concerning the basic types of taxes, with specific questions about the most topical tax policy elements in Croatia. The basic yes/no/other question methodology has also been changed and Likert items (5 levels) are used instead. After the pilot (a couple of academic colleagues of the authors and tax practitioners) some questions were omitted/clarified.

The survey was performed between May and July 2013. The call was sent by e-mail at the beginning of May to 1,000 addresses and sent to other addresses in the middle of July. Most of the answers were gathered by web page, with a small part by post (in hard copy). Out of the population of 1,000 experts targeted, 304 responded.

In accordance with the relevant mentioned surveys (Walker, 1935; Slemrod, 1994; Lim et al., 2013) the tax experts that could be divided into the following three groups: academe, the government sector and the private sector[6] were the population targeted. Academics include professors and researchers at departments (faculties) of economics at universities and research institutes that devote at least part of their scientific and teaching work to the tax system and policy. The government sector consists of the Tax Administration (employees of sectors inside Central Office, heads of regional and local offices) and local and regional government units (heads of the finance departments of those units). The private sector means mostly tax advisors, but also some lecturers of private business polytechnics as well as employees in tax accounting, advising and publishing companies.

---

[4] For instance for US: Behrens (1973), Fisher (1985), IRS (1993), McCabe and Stream (2006), Campbell (2009), Lim et al. (2013), for Israel: Dornstein (1987), for Austria: Kirchler (1999), for Australia: Murphy (2004), for Sweden: Hammar et al. (2008).

[5] For instance for cigarette taxes Green and Gerken (1989), for local tax rates Ashworth and Heyndels (1997), for flat tax and sales taxes McGowan (2000), for estate tax and flat tax Fleischman and Hutchison (2001), for the income tax Eicher et al. (2001), Hasseldine and Hite (2003), for environmental taxes Thalmann (2003), Kallbekken and Saelen (2011), for tax deductibility of mortgages Van der Heijden et al. (2007), for the tax compliance and morale Torgler and Schneider (2005, 2007), Alm et al. (2006), Eicher and Stuhldreher (2007), Randlane (2012), for the estate tax Birney et al. (2006), Fatemi et al. (2008), for CO_2 tax Löfgren and Nordblom (2010), for minimum corporate tax rates Osterloh and Heinemann (2013).

[6] Table A1 in appendix entails detailed information about respondents' structure.

FINANCIAL THEORY AND PRACTICE
38 (4) 405-439 (2014)

As in similar surveys, the 92 survey questions could be thematically divided into a handful of groups: property taxes, personal income tax, corporate income tax, VAT, excise taxes, social contributions, general tax issues and values. In addition, some general questions were set to establish the demographic and professional characteristics of the respondents.

3.2 DEGREE OF CONSENSUS

In order to enable comparison with the relevant NTA survey, at least 61% positive or negative answers (excluding neutral responses) are taken as the threshold for consensus (Lim et al., 2013). Since the Croatian survey was made with 5-level Likert items, the answers under "yes" entail answers "totally/strongly agree" and "mostly agree", while the answers under "no" entail answers "mostly disagree" and "totally/strongly disagree". Table 2 presents the number of answers with the consensus degree of at least 61%[7]. Table A2 in appendix includes detailed data for the degree of consensus for all 92 survey statements/questions.

Table 2
Degree of consensus (number of questions, excluding the neutral response)

Degree of consensus	Total	Academic	Government	Private
Total 61-74%	29	35	33	36
Total 75-100%	35	36	38	32
Total 61-100%	64	71	71	68
Total 61-100% (in %)	69.9	77.2	77.2	73.9

Source: Authors based on survey responses.

As many as 84 questions (out of 100) had a degree of consensus above 61% in the US NTA survey, while such a degree of consensus in Croatian survey was elicited by only 64 statements or 69.9%. If the consensus threshold were raised to 75% equal answers, the number would decline to only 38% (35 out of 92). Due to the frequent tax reforms and tax law changes in Croatia, such a low degree of consensus was to be expected. It is interesting that a slightly broader consensus was reached inside the academic and government sector in contrast to the private one. Unfortunately, there are a significant number of statements without any general (total) consensus, which is not the case at the level of particular groups of respondents (sectors). When the experts are divided into sectors, there is much more homogeneity inside each sector, so a higher percentage of consensus was to be expected. We hope that the further development of the Croatian society will result in a higher level of legal certainty and tax stability, which could also lead to a higher degree of consensus between tax experts. Such a trend is observed in the US with a higher level of consensus in 2013 in comparison with 1994.

[7] This arbitrary but seemingly reasonable threshold for consensus is taken for the relevant comparison with the US survey also (Lim et al., 2013). More certain degree would be 75% for sure, so this is also taken into account.

However, there are some contrary statements, even when a consensus was reached. So it is hard to reach an agreement concerning specific issues without further analysis. Still, there is a significant difference in the degree of consensus even among the questions in which a consensus is achieved.

3.3 SPECIAL TAX ISSUES

As mentioned previously, the 92 statements are divided into several groups concerning special tax issues (see table A2).

Concerning property taxation, only half of the statements reached the percentage for a consensus to have been reached (61%). The main question related to the introduction of real estate tax reached no consensus ("only" 59% of answers in favor). The greatest opposition is found in the academic community, while private and government sectors reached a consensus in favor of that tax. Consensus was also reached about real estate tax being a local tax, for the maintenance of the local surcharge as well as the real estate transfer tax and for property being a necessary additional indicator of ability to pay. Furthermore, the respondents have different ideas about the tax burden of the real estate tax for business and citizens. Overall consensus was reached concerning the statement that citizens should not pay higher rates in than businesses, but not concerning the statement that business should pay higher rates than citizens. Naturally, academia and the government sector supported the latter statement (62% and 65% in favor), in contrast to the private sector (68% against).

Concerning the relatively different systems of property taxes and inheritance and gift taxes in Croatia and the US, it is hard to make any meaningful comparisons. Still, respondents in both countries share the traditional view that real estate tax should be a local tax. On the other hand, unlike Croatian, US experts generally do not think that a real estate tax should distinguish between citizens and business.

Most personal income tax statements, especially those about progressivity, reached a consensus. Most of the respondents agree that the lowest (but not also the highest) marginal rate should be additionally reduced, that a flat tax should not be introduced, that there is no need to reduce the number of tax brackets any further and that tax allowances (deductions) for voluntary pension and life insurance, health insurance/costs and owner-occupied housing should be reintroduced. It could be concluded that respondents strongly share the common vertical equity principle, but this could not be broadened to include capital income taxation in general. Although a consensus was reached concerning dividends and financial capital gains taxation, there was no such consensus about interest on saving and securities.

Concerning the different tax treatments of incomes from labor and from capital, the private sector was alone in not achieving a consensus against the lower taxation of capital incomes. Concerning additional arguments in favor of lower dividend taxation, there are significant differences between the academic and the pri-

FINANCIAL THEORY AND PRACTICE
38 (4) 405-439 (2014)

vate sector on the one hand (accepting it) and the government sector on the other hand. There is a general agreement that capital incomes should not be taxed at lower rates, but there is no consensus about equal treatment of all sources of income or preferential dividend taxation – moreover, there are strong differences between particular sectors.

Due to the long tradition of a consumption-based (interest-adjusted) system of direct taxation in Croatia in general and especially interest-adjusted personal income tax, the basic elements of which remained in force even after 2001, a higher preference of experts for this concept could have been expected. The only such preference is seen in the area of interest on savings (and securities) and, as already said, could be partially attributed to the individual taxpayer's circumstances (in contrast to dividends and financial capital gains taxation[8]). Some "modified element" of consumption-based taxation – a hybrid system between the income and the consumption concept – a lower taxation of capital incomes (instead of their being exempted) – the case of dual income tax, which is coming strongly into Croatian tax system, has, again, reached no support.[9] It seems that experts strongly advocate classical comprehensive income taxation. One could then expect to get a (positive) consensus about the taxation of all sources of income in the same way (regarding Q27 as the control question), but this consensus is achieved only in the government sector. However, this may not be the case, since the question is (could be) related to currently taxable (mostly labor) incomes in Croatia and the very topical problem of "other" (additional, part-time) work being taxed at lower rates (by a way of final withholding tax) in contrast to wages/salaries. The recent idea of the Croatian Ministry of Finance to tax all labor incomes in a same way in order to get additional budgetary revenues was (for the time being) rejected.

As in the previous case, it is hard to make comparisons with the US survey, especially concerning capital income taxation, where the US system is strongly developed, also due to the development of the financial system. A similar conclusion could be drawn regarding the numerous tax allowances/deductions that exist in the US personal income tax system. However, some characteristics in common could be found – affinity to stronger personal income tax progressivity as well as disagreements about taxation of capital income in the US, especially at the capital gains level. There is also a general conclusion about the preference for stronger comprehensive taxation, but some views regarding capital income, property and inheritance and gifts mean that such a view is not undivided.

[8] Not surprisingly, there is a strong and highly significant correlation between advocating dividend and capital gains taxation ($r_s = 0.878$; $p < 0.01$) and much lower between former and interest taxation ($r_s = 0.365$; $p < 0.01$) and later and interest taxation ($r_s = 0.431$; $p < 0.01$). Moreover, these Spearman correlations are calculated for original Lykert type answers (1-5).The same applies to footnote 9.

[9] There is, of course, negative correlation between advocating capital incomes taxation (Q24, 25 and 26) and their lower taxation than labor incomes (Q28). The correlation coefficients are highly significant ($p < 0.01$), but low ($r_s = -0.295$, $r_s =- 0.340$, $r_s = -0.262$). The same is true for the correlation between advocating dividend taxation and their lower taxation ($r_s = -0.304$).

Experts do not consider that the minimum monthly assessment base for social contributions should be abolished. On the other hand, there is no consensus for the abolition of a maximum base (a ceiling). Furthermore, there is a strong disagreement here between the private sector (against abolition) and the government sector (in favor of abolition). Most of the respondents consider the first pillar contributions (intergenerational solidarity) too high, suggesting they should be lowered. Although there is no general consensus, the private sector and academia circles support an increase in the second pillar (individual capitalized saving accounts) contributions.

There is consensus for almost all statements in the field of corporate income tax. Most of the respondents consider that it should boost economic activity, so different incentives should be retained or (re)introduced (different tax holidays and investment allowances). Especially pronounced is the high degree of support (91%) for R&D and educational incentives. A high degree of consensus is achieved for reintroduction of ACE, favoring consumption-based taxation at the corporate level (in contrast to the personal level). The experience of Belgium proves that such system is still (for the time being[10]) compatible with EU requirements. Yet one of the reasons given for its withdrawal in Croatia was its uniqueness in the EU (which was only partially true, due to some already existing elements of ACE in Austria and Italy at that time). Interestingly and relatively unexpectedly, no consensus has been reached for the lowering of the CIT rate. It is especially interesting that the private sector is the only opponent, reaching a consensus against rate lowering. They are probably aware of the relatively low effective rate due to numerous incentives. No comparison of the US and the Croatian survey is possible, since the questions completely differ.

Experts are mostly against aiming at having only one (standard) VAT rate and also against abolition of the reduced rates. So, a consensus was reached concerning the maintenance of reduced rates for basic foodstuffs as well as their extension to all food products. Such an attitude could be explained by the already mentioned relatively high preference of experts for vertical equity. A huge majority (97%, and 100% for the private sector) claim that the standard VAT rate should not be increased further, which is completely expected, since the Croatian VAT rate of 25% is the second highest (after Hungary with 27%) in the EU.

There is high degree of consensus for most statements in the field of excise taxes. Most think that different excise taxes on energy and electricity should "not be raised"/"be lowered". In contrast, most think that excise taxes on tobacco and tobacco products should be increased and that taxation of luxury products should be reintroduced. Here, some resemblance with the US survey, where similar opinions prevail, could be established. Most experts support excise taxes on cars, aircrafts and vessels, while no consensus was reached for excise taxes for coffee and car insurance premiums. Interesting, a consensus was reached for introducing excise

[10] Recent CCCTB development trends should be taken into account, including even the possibility of future shift of this tax base from optional to compulsory.

taxes on "junk food", where the Croatian differ from the US experts, who do not support such special taxes.

3.4 GENERAL TAX ISSUES, EXPERTS' VALUES AND ECONOMIC MODEL

The last twenty survey statements relate to general attitudes about the tax system and policy as well as some economic models. These questions are pretty comparable to the US survey. In contrast to the US survey, no overall consensus has been reached for three of the statements, although even here some partial consensus exists.

For many questions the degree of consensus is high (over 75%). Most of the respondents solve the traditional "equity-efficiency trade-off" in favor of equity. This attitude is expected, taking into consideration the previous survey parts about particular taxes. It could be explained by the historical inheritance and the general justice awareness that prevails in Croatia, but maybe also by some recent tax policy tendencies due to the economic crisis. A high degree of consensus is present for the statement that penalties for tax evasion should be increased and administrative and compliance costs as well as para-fiscal levies decreased. The results for these statements are mostly in accordance with the US experts' opinion.

Most experts think that the share of government in GDP (measured by public revenues and expenditures) should be decreased. In accordance with that there is a consensus about related statements that the entire tax burden should be lowered and the tax structure changed. There is no consensus about the currently advocated introduction of a financial transaction tax, as it is the case in the US survey. On the other hand, there is a consensus about a financial activities tax. One of the reasons for the different attitudes to those financial sector taxes could be the concern of the experts about the incidence of the former tax.

There is also consensus concerning some views about economic effects. Most think that lower marginal income tax rates increase work effort and reduce leisure (81%) and that such a change would increase the tax base so that the revenue lost could be compensated for (65%). Most think also that non taxation of interest encourages saving (78%) and respectively non taxation of financial capital gains encourages investment and promotes economic growth (65%)[11]. The bulk of these reasonings are close to those in the US survey.

While the US experts consider consumption taxes regressive, Croatian experts (except academics) have reached no consensus about regressivity. Maybe this is due to the lack of knowledge of other groups about that term. However, experts from both countries have reached the consensus that CIT is shifted mostly to consumers and employees.

[11] However, one should keep in mind that the neutral answer (3) was eliminated from the survey results. Where it comes to such economic modelling statements (as well as value statements) such skepticism/indecisiveness could be reasonable, expressing no lack of knowledge of the respondents, but their awareness of complexity. The inclusion of neutral answers in these statements would make the results a little bit less optimistic (Blažić, Šimović and Štambuk, 2014).

The efficiency of regional tax investment incentives in Croatia (the city of Vukovar and areas of special national concern) is one of the questions where no general consensus was achieved. A consensus about them not being efficient was reached only in the academic community (68%), while the percentage of negative answers in the private (58%) and government sector (51%) was not high enough. It could be concluded that this attitude supports recently (after the survey) conducted reform of stated investment incentives (their narrowing).

4 DETERMINANTS OF EXPERTS' POLICY OPINIONS IN CROATIA

This part of the paper analyses factors that influence tax experts' attitudes in Croatia using a serial binomial probit regression. As in the case of the degree for consensus being reached, only positive and negative answers (without the neutral one) are observed. As in other relevant research (Lim et al., 2013), the analysis is aimed in two directions. The first part analyses tax expert's attitudes related to some value judgments (values) in the area of taxation, where two questions (Q75 – *The entire tax burden (the level of taxes relative to GDP) should be reduced* and Q91 – *The equity principle should have precedence over the efficiency principle in creating tax policy*) are used as predictors (independent variables). The second part of the analysis encompasses particular economic views related to the behavioral responsiveness and tax incidence, whose predictors (independent variables) are tested over five questions (Q84 – *Non taxation of interest encourages saving*, Q85 – *Non taxation of financial capital gains encourages investment and promotes economic growth*, Q86 – *Different government tax reductions (reliefs, incentives) promote economic growth*, Q79 – *The tax burden should be shifted from personal and corporate income to consumption* and Q80 – *The tax burden should be shifted from personal and corporate income to property*). In both cases, the regression includes also demographic characteristics (employment-sector, age and education level) as independent variables. They are not particularly analyzed but detailed probit regression results, as well for demographic characteristics, are presented in table A3 and A4 in appendix.

Seventeen different models are observed, where seventeen questions/statements that best reflect topical disputes in Croatian tax systems and could be used to assess future tax trends were chosen as dependent variables.

4.1 VALUES

This part of the analysis wants to establish the influence of tax equity values and general values concerning the government's role in the economy on professional attitudes about tax system and policy. In order to establish that influence, Q75 (*The entire tax burden (the level of taxes relative to GDP) should be reduced)* and Q91 (*The equity principle should take precedence over the efficiency principle in creating tax policy*), which somehow express different views concerning tax policy, were chosen as independent variables (predictors). The respondents that support the reduction in the entire tax burden (expressed as the level of taxes relative to GDP) – those that gave that gave the positive answer to Q75 (*The entire tax burden (the level of taxes relative to GDP) should be reduced)* could be regarded as having more (neo)liberal economic views, i.e. advocating a smaller role of government in the economy. On the other hand, those that claim the equity is more important than the efficiency principle (compared to those that have answered negatively) support a greater role for equity, i.e. higher state intervention regarding redistributive issues. Concerning consumption-based taxation, the former group could be expected to be more in favor of and the latter group to be more against it. Table 3 presents the results of binomial probit regression for variables Q75 (*The entire tax burden (the level of taxes relative to GDP) should be reduced)* and Q91 (*The equity principle should take precedence over the efficiency principle in creating tax policy*) reflecting values in the field of taxation.

Presented results imply relatively consistent attitudes of Croatian tax experts. For the most observed models, the experts with neoliberal economic views have mostly different preferences than the experts that advocate greater equity in taxation. Furthermore, Q91 (*The equity principle should take precedence over the efficiency principle in creating tax policy*) is also a more significant predictor than the Q75 (*The entire tax burden (the level of taxes relative to GDP) should be reduced)* – which could imply that the equity principle is the dominant value in shaping tax attitudes for most of the experts.[12]

More neoliberal tax experts, i.e. those that answered to Q75 (*The entire tax burden (the level of taxes relative to GDP) should be reduced)* positively are more inclined to reduce the CIT rate, especially for SMEs. They are also inclined to reduce parafiscal levies and consider that the government should be financed less from taxes and more from user charges. This could be explained by their inclination to the benefit principle ("quid pro quo") as an alternative (in effect older) understanding of equity (equality) instead of the ability to pay principle. That is why they are also not inclined to the taxation of interest income (as well as other capital incomes[13]) following consumption-based (interest-adjusted) taxation concept.

Tax experts expressing a preference for a greater role for vertical equity (those that reacted positively to Q91) are, expectedly, more inclined to the introduction of a real estate tax (as additional indicator of ability to pay) as well as to the taxation of capital incomes such as dividends and capital gains.[14] Not unexpectedly they are also in favor of a financial transaction tax and especially a financial activities tax (as additional ability to pay tax on the "undertaxed" banking sector). Needless

[12] It is harder to make the comparison with the US survey in this context since the set of observed models, i.e. dependent variables is somehow different. The predictors are not identical also, but they could be put in the similar comparable context. In the US survey the question "Is the redistribution of income within the United States a legitimate role for government" turned out to be more important predictor (with the negative influence on attitudes of lower capital income and dividend taxation) than the question about higher equality of income distribution in the US (Lim et al., 2013: 790-791).
[13] However, there is no statistical significance established for other capital incomes.
[14] There is a positive influence on interest taxation also, but without statistical significance.

to say that they are against the flat tax, which, due to its indirect progressivity, jeopardizes the traditional equity-founded appreciation of the ability to pay principle.

Table 3
Binomial probit regression results for values

Question/statement	**Q75**[a]	**Q91**[b]	χ^{2} [c]
Q01 Croatia should introduce the proposed real estate tax.	0.014 (0.324)	0.820** (0.337)	14.658 (0.041)
Q03 Taxation should include other forms of property too (movable property, financial property, etc.), i.e. synthetic taxation of property (net wealth tax).	0.223 (0.343)	0.179 (0.320)	4.136 (0.764)
Q16 Instead of more PIT rates only one rate should be introduced (a flat tax) along with maintenance of personal exemptions.	0.206 (0.341)	-0.672* (0.345)	8.783 (0.269)
Q24 Inside PIT dividends should be taxed.	-0.577 (0.454)	0.740** (0.353)	18.562 (0.010)
Q25 Inside PIT financial capital gains should be taxed.	-0.264 (0.392)	0.843** (0.332)	19.636 (0.006)
Q26 Inside PIT interest on saving and securities should be taxed.	-0.782** (0.362)	0.485 (0.345)	7.758 (0.354)
Q27 All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing the lower withholding tax to be final).	-0.519 (0.421)	-0.048 (0.358)	3.443 (0.841)
Q30 CIT (general) rate should be reduced.	0.841** (0.350)	0.067 (0.328)	10.177 (0.179)
Q31 CIT burden for SMEs should be reduced.	0.810** (0.359)	0.047 (0.394)	14.573 (0.042)
Q32 Reinvested profits should be exempt from taxation.	0.129 (0.428)	-0.141 (0.412)	5.012 (0.659)
Q39 Tax incentives for investment should be maintained.	0.279 (0.430)	0.741 (0.466)	5.067 (0.408)
Q40 Protective interest (allowance for corporate equity, ACE) should be reintroduced.	-0.306 (0.408)	0.580 (0.372)	9.150 (0.242)
Q42 Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/eliminated).	0.031 (0.324)	-0.475 (0.314)	5.973 (0.543)
Q73 A financial transaction tax should be introduced.	-0.167 (0.342)	0.752** (0.360)	15.518 (0.030)
Q74 A financial activities tax should be introduced.	-0.486 (0.482)	1.378*** (0.386)	65.922 (<0.001)
Q76 General government should be financed less from taxes and more from different non-tax revenues (with an emphasis on different user charges).	0.955*** (0.328)	0.327 (0.364)	12.132 (0.096)
Q81 Para-fiscal levies should be reduced.	0.893** (0.447)	0.288 (0.526)	19.890 (0.006)

Notes: Robust standard errors are in parenthesis. The p-values of the χ^2 are in brackets. Other regressors include indicators of sector of employment, age and education.
$* p < 0.1$; $** p < 0.05$; $*** p < 0.01$.
a) Q75 – Entire tax burden (the level of taxes relative the GDP) should be reduced.
b) Q91 – The equity principle should be prior to efficiency principle in creating tax policy.
c) Wald χ^2 tests the hypothesis that at least one of the regression coefficients is not equal to zero.
Source: Authors' calculation.

4.2 ECONOMIC VIEWS

In order to establish the prevalence of specific economic views in taxation, statements/questions that relate to taxpayers' behavior and tax incidence are used as independent variables (predictors). For the taxpayers' behavioral response questions/statements QP84 (*Non taxation of interest encourages saving),* QP85 (*Non taxation of financial capital gains encourages investment and promotes economic growth*) and QP86 (*Different government tax reductions (reliefs, incentives) promote economic growth*) are used and for the tax incidence additional two questions/statements (Q79 – *The tax burden should be shifted from personal and corporate income to consumption* and Q80 – *The tax burden should be shifted from personal and corporate income to property*) are used. Table 4 presents the results of a binomial probit regression for the stated variables.

Results relating to tax incidence show a relatively consistent attitude among tax experts. On the other hand, there are some inconsistencies concerning behavioral responses, which have already been referred to in the part of the analysis concerning the degree of consensus achieved.

Among behavioral response questions/statements, Q86 (*Different government tax reductions (reliefs, incentives) promote economic growth*) turned out to be the best predictor. The experts that answered that question positively (compared to those that answered negatively) are more inclined to exempt the reinvested profits from taxation, to maintain different tax incentives and to reduce para-fiscal levies. They are also not inclined to abolish reduced VAT rates. This approach in favor of tax incentives and reliefs could be regarded as "classical interventionist" approach, where economic efficiency is not understood in a sense of neutrality, but more from a (cost)-effectiveness approach. Although the critics could say this has been consigned to history and is definitely incompatible with modern consumption-based proposals, as well as with modern tax reform proposals in general from the eighties on, it is still popular especially in the tax practice of developing countries and (post)transition economies. The recent (re)introduction of numerous incentives in the developed countries at the beginning of the economic and financial crisis, shows that they are indeed still compatible with a modern tax system. Furthermore, the respondents that reacted positively to Q86 are in favor of real estate tax as well as net wealth tax, which could be easier explained by a traditional "interventionist" approach than the newest reform tendencies in favor of these taxes.

Since it is more narrow, Q85 (*Non taxation of financial capital gains encourages investment and promotes economic growth*) turned out to be a less important predictor. The experts that answered this question positively (compared to those that answered negatively) are, logically, not in favor of capital gains taxation only, but also of dividend taxation as well as a financial activities tax. Since the non-taxation of capital gains (as well as all capital incomes) is one of the crucial characteristics of consumption-based (interest-adjusted) taxation it is completely logical that the same reasoning should be broadened to include dividend taxation (and also interest taxation, where the relationship is negative also, but not statistically significantly so). Furthermore, those interested in reducing the tax burden and tax distortions in financial markets are, logically again, not in favor of a financial transaction tax.

It is interesting that the same experts do not think that CIT incentives should be maintained. Although it could seem peculiar to the general public, it is completely in accordance with consumption-based approach or the more general modern "base broadening" approach, where non-taxation of capital incomes and rate lowering of taxable incomes are advocated as better and more neutral incentive measures.

Q84 (*Non taxation of interest encourages saving*) showed all the controversiality of interest taxation attitudes as well as of the survey in general. Although there is a negative influence presented concerning the need for interest taxation (Q26), it is not statistically significant. Q84 turned out to be significant predictor only for flat tax introduction. The link between non-taxation of interest as one of the basic characteristic of consumption-based (interest-adjusted) taxation and Hall-Rabushka flat tax – one of the typical examples of interest-adjusted personal income tax accompanied with only one rate needn't to be additionally explained. Regardless of statistical insignificance of other relationships, it is interesting that some of them are of a different direction in comparison with Q85 (*Non taxation of financial capital gains encourages investment and promotes economic growth*), which implies a lot of disagreements but also inconsistences among tax experts.

Regardless of the stated inconsistencies, statements/questions Q85 (*Non taxation of financial capital gains encourages investment and promotes economic growth*) and Q86 (*Different government tax reductions (reliefs, incentives) promote economic growth*) turned out to be significant predictors, which work in the expected direction in most of the tested models, i.e. imply similar attitudes of the tax experts about different tax incentive mechanisms. Similar tendencies could be established in relation with the relevant US survey, where similar attitudes prevail and the question about influence of taxation on private saving turned out to be the weakest predictor (Lim et al., 2013: 791-793).

Table 4
Binomial probit regression results for economic views

Question/statement	Behavioral responsiveness			Incidence		χ^{2} [f]
	Q84[a]	Q85[b]	Q86[c]	Q79[d]	Q80[e]	
Q01 Croatia should introduce the proposed real estate tax.	-0.777 (0.530)	-0.472 (0.396)	0.661* (0.381)	-0.273 (0.359)	1.333*** (0.326)	30.322 (0.001)
Q03 Taxation should include other forms of property too (movable property, financial property, etc.), i.e. synthetic taxation of property (net wealth tax).	-0.762 (0.587)	-0.411 (0.424)	0.658* (0.379)	-0.409 (0.342)	0.628** (0.308)	20.325 (0.026)
Q16 Instead of more PIT rates only one rate should be introduced (a flat tax) along with the maintenance of personal exemptions.	1.203* (0.63)	-0.280 (0.387)	0.059 (0.361)	0.797** (0.357)	-0.079 (0.316)	16.127 (0.096)
Q24 Inside PIT, dividends should be taxed.		-1.120* (0.622)	0.593 (0.44)	-0.836** (0.413)	0.987*** (0.363)	24.869 (0.003)
Q25 Inside PIT, financial capital gains should be taxed.	-0.066 (0.752)	-2.005*** (0.766)	0.305 (0.444)	-0.802** (0.406)	1.289*** (0.367)	27.245 (0.002)
Q26 Inside PIT, interest on saving and securities should be taxed.	-0.04 (0.632)	-0.072 (0.426)	0.111 (0.395)	-1.588*** (0.434)	1.709*** (0.427)	34.057 (<0.001)
Q27 All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing the lower withholding tax to be the final tax).	0.233 (0.604)	-0.044 (0.426)	-0.644* (0.38)	-0.408 (0.384)	0.614* (0.338)	9.065 (0.526)
Q30 The CIT (general) rate should be reduced.	0.396 (0.487)	0.186 (0.377)	0.393 (0.342)	0.621* (0.324)	-0.310 (0.299)	15.61 (0.111)
Q31 The CIT burden for SMEs should be reduced.	0.249 (0.493)	-0.433 (0.405)	0.525 (0.375)	1.068*** (0.384)	-0.297 (0.331)	19.723 (0.032)
Q32 Reinvested profits should be exempt from taxation.	0.309 (0.489)	0.245 (0.386)	0.966** (0.383)	-0.194 (0.352)	0.02 (0.354)	18.369 (0.049)
Q39 Tax incentives for investment should be maintained.	0.582 (0.672)	-1.243** (0.593)	1.194** (0.571)	-1.542** (0.777)	-0.466 (0.423)	13.31 (0.149)
Q40 Protective interest (allowance for corporate equity, ACE) should be reintroduced.	-0.149 (0.629)	0.074 (0.430)	0.307 (0.410)	-0.261 (0.394)	-0.353 (0.364)	3.929 (0.950)

Question/statement	Behavioral responsiveness			Incidence		χ^{2} [f]
	Q84[a]	Q85[b]	Q86[c]	Q79[d]	Q80[e]	
Q42 Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/eliminated).	0.429 (0.528)	0.565 (0.381)	-0.882** (0.360)	0.902*** (0.328)	0.060 (0.308)	16.966 (0.075)
Q73 A financial transaction tax should be introduced.	-0.009 (0.569)	-0.441 (0.424)	0.330 (0.380)	-0.135 (0.361)	0.857** (0.343)	24.79 (0.006)
Q74 A financial activities tax should be introduced.	0.168 (0.653)	-0.971* (0.500)	-0.003 (0.445)	0.150 (0.423)	0.427 (0.375)	43.793 (<0.001)
Q76 General government should be financed less from taxes and more from different non-tax revenues (with emphasis of different user charges).	0.146 (0.471)	-0.087 (0.374)	0.481 (0.338)	0.054 (0.348)	-0.046 (0.309)	6.269 (0.792)
Q81 Para-fiscal levies should be reduced.		0.051 (0.862)	1.562*** (0.581)	0.309 (0.663)	0.545 (0.515)	163.172 (<0.001)

Notes: Robust standard errors are in parenthesis. The p-values of the χ^2 are in brackets. Other regressors include indicators of sector of employment, age and education. Omitted variable dropped from the estimation because model predicts success perfectly.
** $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.*
a) Q84 – Non taxation of interest encourages saving.
b) Q85 – Non taxation of financial capital gains encourages investment and promotes economic growth.
c) Q86 – Different government tax reductions (reliefs, incentives) promote economic growth.
d) Q79 – Tax burden should be shifted from personal and corporate income to consumption.
e) Q80 – Tax burden should be shifted from personal and corporate income to property.
f) Wald χ^2 tests the hypothesis that at least one of the regression coefficients is not equal to zero.

Source: Authors' calculation.

Economic incidence results show relatively consistent attitudes of tax experts.[15] Q79 (*The tax burden should be shifted from personal and corporate income to consumption*) turned out to be the most important predictor. The experts that responded to that question positively (compared to those that answered negatively) are, expectedly, not in favor of capital income taxation in general (dividends, interest and capital gains) and are in favor of flat tax introduction, only one (standard) VAT rate as well as a reduction of the tax burden for SMEs. These experts follow contemporary tax policy recommendations and consumption-based (interest-adjusted) tax concept in general. Those experts are very precise in their attitudes and the answers are in accordance with expectations at most tested models. Again, it is not surprising that the experts that favor a general non-taxation of capital incomes, flat tax and only one VAT rate are against retaining specific tax incentives. So, they prefer general horizontal and "neutral" effects and not "distortive" tax incentives. Not surprisingly, these incentives were introduced after Croatia abandoned consumption-based taxation at personal and corporate levels (table 1).

Q80 (*Tax burden should be shifted from personal and corporate income to property*) also turned out to be important predictor. The experts that answered this question positively (compared to those that answered negatively) are, logically, in favor of real estate tax as well as net wealth tax. But they are also more inclined to income-based taxation (in contrast to consumption-based of the former group) – they are in favor of capital income taxation (interest, dividends and capital gains) as well as of taxing all income sources in the same way (classical comprehensive S-H-S income). Not surprisingly that they are also in favor of a proposed financial transaction tax.

Although both predictors (Q79 – *The tax burden should be shifted from personal and corporate income to consumption* and Q80 – *The tax burden should be shifted from personal and corporate income to property)* point to the experts' attitudes relatively precisely, neither of them turned out to be significant (and positive) for Q40 (reintroduction of ACE tax). This is about an instrument that was crucial for the consumption-based interest-adjusted corporate income taxation in Croatia implemented in 1994-2000. On the other hand, both predictors are significant for the (non)-taxation of capital incomes (Q24, Q25 and Q26) – the instruments that were crucial for the consumption-based interest-adjusted personal income tax not only in the same period, but also even further. The fact that ACE, unlike non-taxation of capital incomes non-taxation, has not been in effect since 2001, i.e. that it is almost forgotten, could be the main reason behind the lack of consistent (and positive) reactions to that instrument as well as a lot of neutral answers for this question (more than one quarter).

[15] In contrast to behavioral questions/statements, the comparison with US survey results is not possible here since the Croatian research entails other predictor questions that are more applicable to the Croatian tax system characteristics.

5 CONCLUSION

Maybe disappointingly, but not unexpectedly, there is no high and broad consensus of Croatian tax experts although the technique which was applied (elimination of neutral answers, yes or no answers only) implies as high a consensus as possible.

However, the relatively high degree of consensus concerning some specific questions enables us to draw some general conclusions about experts' attitudes. In the field of (personal and corporate) income taxation they include maintenance of corporate tax incentives, reintroduction of personal income tax reliefs (deductions), and rejection of a flat tax as well as a decrease in number of tax brackets. Concerning consumption taxation, the most interesting results are in favor of the maintenance and even broadening of reduced VAT rates as well as an increase in alcohol and tobacco duties. Although experts support financial sector taxation in general, consensus was reached not about a financial transaction tax, but about a financial activities tax. Concerning general tax issues a further shift from income to consumption as well as decrease of the share of taxation in GDP, as expected, is advocated. Experts showed remarkable belief in behavioral responsiveness of tax decreases/exemptions, but, on the other hand, solved the traditional equity-efficiency trade-off in favor of equity.

In a sectoral comparison, the government sector expresses higher social sensibility (equity principle) and a stronger inclination to the classical income-based – ability to pay principle (which is reflected also in the property as additional ability to pay indicator). However government officers are not in favor of personal income tax deductions, maybe due to their high administrative costs, which burden the tax administration directly. The academic sector could be said to be more "rational" being not so much against a consumption-based (interest-adjusted) taxation as other sectors, but still not in favor of it (with the exception of the ACE tax that received substantial support).

Some values and economic views are found to be important and consistent predictors of tax opinions. This is especially true of the equity principle, the behavioral effects of tax reductions and attitudes related to tax incidence. The results are consistent with the consumption-based versus income-based concepts.

APPENDIX

Table A1
Demographics and sample information

Structure of respondents	Valid percent
Age	
18-29	17.2
30-44	46.7
45-54	19.4
55+	16.7
Education	
High school degree	4.6
Associate degree/ BA	11.2
Graduate/Master	45.2
MSc	7.3
PhD	31.7
Sector	
Private sector	9.6
Government sector	43.5
Academic community	46.9
Sector: Private sector	
Tax advisor	50.0
Editor and/or business advisor	16.7
Others	20.8
High business school (lecturer)	12.7
Sector: Government sector	
Local and regional units	48.7
Tax Administration	41.6
Ministry of Finance (outside Tax Administration)	1.8
Others	4.4
Sector: Academic community	
Economics	86.2
Law	12.2
Political sciences	1.6
Sector: Academic community – Economics	
Public finance	23.1
Monetary finance and financial markets	18.3
Corporate finance and accounting	26.0
Macroeconomics	24.0
Management/entrepreneurship	8.7

Source: Authors – survey.

Table A2

Responses' distribution (in %) for all respondents and main groups according to employment (without neutral answer)

No.	Statement/question	Total		Academic		Government		Private	
		No	Yes	No	Yes	No	Yes	No	Yes
	Property taxes, inheritance and gift taxes								
1	Croatia should introduce the proposed real estate tax.	41	59	47	53	37	**63**	39	**61**
2	Real estate tax should be a local tax.	18	**82**	18	**82**	21	**79**	16	**84**
3	Taxation should include other forms of property too (movable property, financial property, etc.), i.e. should be a synthetic taxation of property (net wealth tax).	44	56	50	50	39	**61**	50	50
4	Regardless of any possible real estate tax introduction, communal charge should still remain local revenue.	48	52	42	58	50	50	**71**	29
5	Regardless of any possible real estate tax introduction, tax on holiday houses should remain local revenue too.	43	57	34	**66**	46	54	**68**	32
6	Regardless of any possible real estate tax introduction, surtax on income tax should still remain local revenue too.	33	**67**	30	**70**	33	**67**	48	52
7	Real estate tax should be assessed at the same rate for business and residents.	**71**	29	**75**	25	**71**	29	**68**	32
8	Business should be taxed at a higher rate than residents.	40	60	38	**62**	35	**65**	**68**	32
9	Residents should be taxed at a higher rate than business.	**88**	12	**87**	13	**88**	12	**82**	18
10	Inheritances and gifts should be taxed.	56	44	54	46	**61**	39	43	57
11	Inheritance and gift taxation should be progressive – according to the property inherited/gifted and the proximity of the relationship (in contrast to the current 5% with the exemption for the closest family members).	51	49	52	48	49	51	46	54
12	Real estate transfers should be taxed.	16	**84**	20	**80**	14	**86**	8	**92**
13	Property is a necessary additional indicator of ability to pay besides income.	17	**83**	14	**86**	17	**83**	23	**77**
	Personal income tax								
14	The highest PIT rate should be reduced further (recently reduced from 45% to 40%).	52	48	49	51	57	43	48	52

No.	Statement/question	Total		Academic		Government		Private	
		No	Yes	No	Yes	No	Yes	No	Yes
15	The lowest PIT rate should be reduced further (recently reduced from 15% to 12%).	34	**66**	36	**64**	29	**71**	46	54
16	Instead of more PIT rates only one rate should be introduced (a flat tax) along with maintaining personal exemption.	**69**	31	**63**	37	**72**	28	**79**	21
17	The number of tax brackets should be increased (currently three).	47	53	41	59	49	51	**70**	30
18	The number of tax brackets should be decreased (currently three).	**81**	19	**77**	23	**83**	17	**86**	14
19	Tax deductions/allowances for health costs should be reintroduced.	27	**73**	23	**77**	27	**73**	46	54
20	Tax deductions/allowances for owner-occupied housing should be reintroduced.	30	**70**	23	**77**	35	**65**	48	52
21	Tax deductions/allowances for life insurance should be reintroduced.	40	60	34	**66**	47	53	39	**61**
22	Tax deductions/allowances for voluntary pension insurance should be reintroduced.	35	**65**	29	**71**	42	58	32	**68**
23	Tax deductions/allowances for additional and private health insurance should be reintroduced.	35	**65**	30	**70**	38	**62**	36	**64**
24	Inside PIT, dividends should be taxed.	27	**73**	35	**65**	14	**86**	38	**63**
25	Inside PIT, financial capital gains should be taxed.	23	**77**	34	**66**	13	**87**	29	**71**
26	Inside PIT interest on saving and securities should be taxed.	54	46	60	40	46	54	55	45
27	All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing the lower withholding tax to be the final tax due).	43	57	42	58	36	**64**	55	45
28	Capital incomes should be taxed at lower rates than labor incomes.	**70**	30	**61**	39	**80**	20	57	43
29	Dividends should be taxed at lower rates than other incomes (due to the economic double taxation of dividends).	43	57	28	**72**	**61**	39	38	**62**
	Corporate income tax								
30	CIT (general) rate should be reduced.	46	54	41	59	48	52	**64**	36
31	CIT burden for SMEs should be reduced.	21	**79**	21	**79**	17	**83**	36	**64**
32	Reinvested profits should be exempt from taxation.	12	**88**	7	**93**	12	**88**	25	**75**
33	Tax incentives for areas of special national concern should be maintained.	32	**68**	29	**71**	35	**65**	15	**85**

No.	Statement/question	Total		Academic		Government		Private	
		No	Yes	No	Yes	No	Yes	No	Yes
34	Tax incentives for mountain areas should be maintained.	32	**68**	34	**66**	31	**69**	15	**85**
35	Tax incentives for free trade zones should be maintained.	31	**69**	27	**73**	32	**68**	28	**72**
36	Tax incentives for the city of Vukovar should be maintained.	23	**77**	23	**77**	21	**79**	16	**84**
37	Tax incentives (state aid) for R&D should be maintained	9	**91**	8	**92**	8	**92**	17	**83**
38	Tax incentives (state aid) for the education of employees should be maintained.	9	**91**	6	**94**	10	**90**	14	**86**
39	Tax incentives for investment should be maintained.	11	**89**	9	**91**	12	**88**	13	**88**
40	Protective interest (allowance for corporate equity, ACE) should be reintroduced.	25	**75**	27	**73**	24	**76**	26	**74**
41	Accelerated depreciation (double depreciation rates) should be maintained.	26	**74**	20	**80**	28	**72**	39	**61**
	VAT								
42	Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/eliminated).	**64**	36	**65**	35	**63**	37	**62**	38
43	In the transitional period (after accessing EU) Croatia should have tried to maintain zero rate of VAT for some goods and services that have a social purpose.	25	**75**	28	**72**	18	**82**	36	**64**
44	Tourist and restaurant services should be taxed at lower VAT rate.	51	49	48	52	57	43	39	**61**
45	Some basic foodstuff (bread, milk, baby food, edible oils and fats) should be taxed at a reduced VAT rate.	13	**87**	17	**83**	8	**92**	20	**80**
46	A special scheme for VAT for farmers should be introduced.	25	**75**	20	**80**	27	**73**	26	**74**
47	Standard/general VAT rate should be increased.	**97**	3	**97**	3	**98**	2	**100**	0
48	An increase of the standard/general VAT rate is better than the introduction of “crises tax”.	**62**	38	**67**	33	**63**	37	37	**63**
49	Instead of reduced VAT rates for some “basic” foodstuffs the reduced VAT rate for all foodstuffs (and water) should be introduced.	36	**64**	39	**61**	35	**65**	41	59
50	The reduced VAT rate for newspapers and periodicals should not be applied for “the yellow press”.	27	**73**	26	**74**	25	**75**	36	**64**
51	The reduced VAT rate should be higher for scientific journals than for the daily press.	60	40	58	42	58	42	**78**	22

No.	Statement/question	Total		Academic		Government		Private	
		No	Yes	No	Yes	No	Yes	No	Yes
52	VAT revenues should be partially directed to local government.	40	60	43	57	35	**65**	55	45
	Excise duties								
53	A special tax on "junk food" should be introduced.	34	**66**	29	**71**	34	**66**	47	53
54	Excise taxes on mineral oil and petroleum products should be decreased.	27	**73**	33	**67**	21	**79**	32	**68**
55	Excise duties on natural gas should be increased.	**91**	9	**91**	9	**91**	9	**89**	11
56	Excise duties on electricity should be increased.	**94**	6	**90**	10	**98**	2	**95**	5
57	Excise duties on alcohol should be increased.	18	**82**	18	**82**	18	**82**	18	**82**
58	Excise duties on wine should be introduced.	60	40	58	42	59	41	**71**	29
59	Excise duties on tobacco and tobacco products should be increased.	15	**85**	11	**89**	15	**85**	24	**76**
60	Croatia has enough excise duties.	7	**93**	6	**94**	9	**91**	5	**95**
61	Excise duties should be levied on luxury products.	20	**80**	19	**81**	16	**84**	42	58
62	Excise duties should be levied on cars and other vehicles.	36	**64**	32	**68**	37	**63**	45	55
63	Excise duties should be levied on aircrafts and vessels.	22	**78**	24	**76**	15	**85**	40	60
64	Excise duties should be levied on liability and comprehensive road vehicle insurance premiums.	59	41	55	45	60	40	**81**	19
65	Excise duties should be levied on coffee.	55	45	50	50	58	42	55	45
66	Excise duties should be levied on non-alcoholic beverages.	**68**	32	**65**	35	**74**	26	**65**	35
	Social contributions								
67	The ceiling for pension insurance contributions should be abolished.	43	57	44	56	37	**63**	**70**	30
68	Minimum assessment base for pension insurance contributions should be abolished.	**72**	28	**70**	30	**72**	28	**76**	24
69	Rates for compulsory pension insurance contributions for intergenerational solidarity (1st pillar) should be decreased.	39	**61**	39	**61**	41	59	33	**67**
70	Rates for compulsory pension insurance contributions for individual capitalized savings accounts (2nd pillar) should be increased.	40	60	34	**66**	48	52	33	**67**
71	Health insurance contributions should be decreased.	41	59	40	60	44	56	30	**70**

No.	Statement/question	Total		Academic		Government		Private	
		No	Yes	No	Yes	No	Yes	No	Yes
72	Small business personal income taxpayers are in a favorable position compared to employment income taxpayers concerning compulsory social security contributions' payment.	47	53	43	57	51	49	43	57
	General tax issues, experts' values and economic model								
73	A financial transaction tax should be introduced.	44	56	50	50	36	**64**	53	47
74	A financial activities tax should be introduced.	23	**77**	33	**67**	6	**94**	53	47
75	The entire tax burden (the level of taxes relative to GDP) should be reduced.	15	**85**	17	**83**	15	**85**	5	**95**
76	General government should be financed less from taxes and more from different non-tax revenues (with an emphasis on different user charges).	35	**65**	33	**67**	38	**62**	37	**63**
77	The entire level of public revenues (and public expenditures) relative to GDP should be lowered.	18	**82**	23	**77**	16	**84**	9	**91**
78	The tax structure should be changed.	8	**92**	11	**89**	8	**93**	0	**100**
79	The tax burden should be shifted from personal and corporate income to consumption.	33	**67**	31	**69**	34	**66**	35	**65**
80	The tax burden should be shifted from personal and corporate income to property.	48	52	47	53	45	55	**71**	29
81	Para-fiscal levies should be reduced.	5	**95**	7	**93**	3	**97**	4	**96**
82	Lower marginal income tax rates reduce leisure and increase work effort.	19	**81**	18	**82**	18	**82**	21	**79**
83	Lower marginal income tax rates increase work effort and taxable income generally so much as to raise revenue.	35	**65**	34	**66**	37	**63**	31	**69**
84	Non taxation of interest encourages saving.	22	**78**	22	**78**	24	**76**	14	**86**
85	Non taxation of financial capital gains encourages investment and promotes economic growth.	35	**65**	34	**66**	37	**63**	24	**76**
86	Different government tax reductions (reliefs, incentives) promote economic growth.	21	**79**	19	**81**	24	**76**	17	**83**
87	VAT is regressive.	40	60	33	**67**	42	58	59	41
88	CIT is mostly shifted onto consumers and employees.	26	**74**	23	**77**	28	**72**	33	**67**

FINANCIAL THEORY AND PRACTICE
38 (4) 405-439 (2014)

No.	Statement/question	Total		Academic		Government		Private	
		No	Yes	No	Yes	No	Yes	No	Yes
89	Regional tax incentives (city of Vukovar, areas of special national concern) are efficient concerning investment attraction.	59	41	**68**	32	51	49	58	42
90	Administrative and compliance costs of taxation should a play significant role in creating tax policy (these costs should be reduced by making the tax system significantly simpler).	6	**94**	9	**91**	5	**95**	5	**95**
91	The equity principle should have priority over the efficiency principle in creating tax policy.	13	**87**	15	**85**	6	**94**	40	60
92	Penalties for tax evasion should be increased.	13	**87**	11	**89**	12	**88**	29	**71**

Note: Answers above 61% are bolded.

Source: Authors – survey.

TABLE A3

Binomial probit regression results for values, detailed

			Sector[c]			Education[d]		
Question/statement	Q75[a]	Q91[b]	Public	Academic	Age	Level 7 Master	Level 8.1-8.2 MSc/PhD	χ^{2} [e]
Q01 Croatia should introduce the proposed real estate tax.	0.014 (0.324)	0.820** (0.337)	-0.456 (0.401)	-0.432 (0.410)	-0.007 (0.011)	0.171 (0.329)	-0.431 (0.436)	14.658 (0.041)
Q03 Taxation should include other forms of property too (movable property, financial property, etc.), i.e. synthetic taxation of property (net wealth tax).	0.223 (0.343)	0.179 (0.320)	0.140 (0.404)	-0.030 (0.402)	0.009 (0.010)	-0.149 (0.339)	-0.275 (0.450)	4.136 (0.764)
Q16 Instead of more PIT rates only one rate should be introduced (a flat tax) along with the maintenance of personal exemption.	0.206 (0.341)	-0.672* (0.345)	0.079 (0.490)	0.356 (0.481)	-0.004 (0.011)	-0.257 (0.331)	0.065 (0.456)	8.783 (0.269)
Q24 Inside PIT, dividends should be taxed.	-0.577 (0.454)	0.740** (0.353)	0.702 (0.448)	-0.240 (0.418)	0.014 (0.012)	0.390 (0.398)	0.190 (0.535)	18.562 (0.010)
Q25 Inside PIT, financial capital gains should be taxed.	-0.264 (0.392)	0.843** (0.332)	0.387 (0.453)	-0.586 (0.412)	0.012 (0.013)	0.567 (0.414)	0.356 (0.534)	19.636 (0.006)
Q26 Inside PIT, interest on saving and securities should be taxed.	-0.782** (0.362)	0.485 (0.345)	-0.011 (0.413)	-0.301 (0.415)	0.008 (0.011)	-0.216 (0.363)	0.090 (0.477)	7.758 (0.354)
Q27 All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing for the lower withholding tax to be the final tax due).	-0.519 (0.421)	-0.048 (0.358)	0.231 (0.481)	0.350 (0.459)	0.009 (0.011)	-0.075 (0.361)	0.028 (0.503)	3.443 (0.841)
Q30 CIT (general) rate should be reduced.	0.841** (0.350)	0.067 (0.328)	0.133 (0.409)	0.723* (0.412)	0.010 (0.011)	0.210 (0.341)	-0.579 (0.455)	10.177 (0.179)
Q31 CIT burden for SMEs should be reduced.	0.810** (0.359)	0.047 (0.394)	0.596 (0.514)	0.781* (0.460)	-0.018 (0.012)	0.501 (0.418)	-0.184 (0.558)	14.573 (0.042)
Q32 Reinvested profits should be exempt from taxation.	0.129 (0.428)	-0.141 (0.412)	0.012 (0.475)	0.534 (0.525)	0.004 (0.012)	0.613 (0.392)	-0.130 (0.544)	5.012 (0.659)

			Sector[c]			Education[d]		
Question/statement	**Q75[a]**	**Q91[b]**	**Public**	**Academic**	**Age**	**Level 7 Master**	**Level 8.1-8.2 MSc/PhD**	**$\chi^{2\,e}$**
Q39 Tax incentives for investment should be maintained.	0.279 (0.430)	0.741 (0.466)	-0.966 (0.598)		-0.013 (0.016)		-0.939 (0.616)	5.067 (0.408)
Q40 Protective interest (allowance for corporate equity, ACE) should be reintroduced.	-0.306 (0.408)	0.580 (0.372)	-0.690 (0.610)	-0.094 (0.538)	-0.003 (0.011)	-0.052 (0.411)	-0.865 (0.528)	9.150 (0.242)
Q42 Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/eliminated).	0.031 (0.324)	-0.475 (0.314)	0.192 (0.394)	-0.014 (0.413)	0.004 (0.01)	-0.283 (0.318)	0.147 (0.432)	5.973 (0.543)
Q73 A financial transaction tax should be introduced.	-0.167 (0.342)	0.752** (0.360)	0.419 (0.432)	-0.203 (0.440)	0.015 (0.011)	0.792** (0.342)	0.722* (0.436)	15.518 (0.030)
Q74 A financial activities tax should be introduced.	-0.486 (0.482)	1.378*** (0.386)	1.600*** (0.539)	0.313 (0.5)	0.018 (0.015)	0.653 (0.558)	-0.206 (0.716)	65.922 (<0.001)
Q76 General government should be financed less from taxes and more from different non-tax revenues (with an emphasis on different user charges).	0.955*** (0.328)	0.327 (0.364)	-0.202 (0.466)	0.266 (0.456)	0.001 (0.011)	-0.436 (0.355)	-0.772 (0.473)	12.132 (0.096)
Q81 Para-fiscal levies should be reduced.	0.893** (0.447)	0.288 (0.526)	0.531 (0.802)	0.066 (0.669)	0.034* (0.02)	0.187 (0.626)	0.096 (0.766)	19.89 (0.006)

Notes: Robust standard errors are in parenthesis. The p-values of the χ^2 are in brackets. Other regressors include indicators of sector of employment, age and education. Omitted variable dropped from the estimation because model predicts success perfectly.
** $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.*
a) Q75 – Entire tax burden (the level of taxes relative the GDP) should be reduced.
b) Q91 – The equity principle should be prior to efficiency principle in creating tax policy.
c) Reference category is private sector.
d) Reference category is Level 4.2-6 according to Croatian Qualification Framework (high school – bachelor).
e) Wald χ^2 tests the hypothesis that at least one of the regression coefficients is not equal to zero.

Source: Authors' calculation.

Table A4

Binomial probit regression results for economic views, detailed

Question/statement	Behavioral responsiveness Q84[a]	Q85[b]	Q86[c]	Incidence Q79[d]	Q80[e]	Sector[f] Public	Academic	Age	Education[g] Level 7 Master	Level 8.1-8.2 MSc/PhD	χ^{2} [h]
Q01 Croatia should introduce the proposed real estate tax.	-0.777 (0.530)	-0.472 (0.396)	0.661* (0.381)	-0.273 (0.359)	1.333*** (0.326)	0.420 (0.527)	-0.035 (0.528)	0.005 (0.015)	0.296 (0.474)	0.411 (0.580)	30.322 (0.001)
Q03 Taxation should include other forms of property too (movable property, financial property, etc.), i.e. synthetic taxation of property (net wealth tax).	-0.762 (0.587)	-0.411 (0.424)	0.658* (0.379)	-0.409 (0.342)	0.628** (0.308)	-0.806 (0.527)	-0.573 (0.490)	0.027** (0.013)	-0.288 (0.459)	-0.510 (0.602)	20.325 (0.026)
Q16 Instead of more PIT rates only one rate should be introduced (a flat tax) along with the maintenance of personal exemption.	1.203* (0.630)	-0.280 (0.387)	0.059 (0.361)	0.797** (0.357)	-0.079 (0.316)	0.364 (0.516)	-0.111 (0.525)	-0.022 (0.014)	0.039 (0.414)	0.831 (0.554)	16.127 (0.096)
Q24 Inside PIT, dividends should be taxed.		-1.120* (0.622)	0.593 (0.44)	-0.836** (0.413)	0.987*** (0.363)	0.342 (0.634)	-0.428 (0.578)	0.006 (0.014)	0.244 (0.505)	-0.538 (0.677)	24.869 (0.003)

	Behavioral responsiveness			Incidence		Sector[f]			Education[g]		
Question/statement	**Q84[a]**	**Q85[b]**	**Q86[c]**	**Q79[d]**	**Q80[e]**	**Public**	**Academic**	**Age**	**Level 7 Master**	**Level 8.1-8.2 MSc/PhD**	**χ^{2}[h]**
Q25 Inside PIT, financial capital gains should be taxed.	-0.066 (0.752)	-2.005*** (0.766)	0.305 (0.444)	-0.802** (0.406)	1.289*** (0.367)	0.184 (0.656)	-0.875 (0.61)	0.002 (0.014)	0.485 (0.499)	-0.076 (0.651)	27.245 (0.002)
Q26 Inside PIT, interest on savings and securities should be taxed.	-0.040 (0.632)	-0.072 (0.426)	0.111 (0.395)	-1.588*** (0.434)	1.709*** (0.427)	-1.496*** (0.58)	-0.843 (0.582)	-0.001 (0.016)	-0.554 (0.515)	-1.084 (0.709)	34.057 (<0.001)
Q27 All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing the lower withholding tax to be the final tax due).	0.233 (0.604)	-0.044 (0.426)	-0.644* (0.38)	-0.408 (0.384)	0.614* (0.338)	-0.532 (0.559)	-0.111 (0.513)	-0.006 (0.013)	-0.312 (0.439)	-0.477 (0.593)	9.065 (0.526)
Q30 CIT (general) rate should be reduced.	0.396 (0.487)	0.186 (0.377)	0.393 (0.342)	0.621* (0.324)	-0.310 (0.299)	0.422 (0.552)	0.101 (0.54)	-0.014 (0.013)	0.400 (0.415)	0.560 (0.571)	15.610 (0.111)
Q31 CIT burden for SMEs should be reduced.	0.249 (0.493)	-0.433 (0.45)	0.525 (0.375)	1.068*** (0.384)	-0.297 (0.331)	0.878 (0.64)	0.298 (0.684)	-0.022 (0.018)	0.792* (0.447)	0.970 (0.669)	19.723 (0.032)
Q32 Reinvested profits should be exempt from taxation.	0.309 (0.489)	0.245 (0.386)	0.966** (0.383)	-0.194 (0.352)	0.020 (0.354)	0.540 (0.579)	1.002 (0.614)	0.016 (0.017)	0.809* (0.461)	0.324 (0.630)	18.369 (0.049)

	Behavioral responsiveness			Incidence		Sector[f]			Education[g]		
Question/statement	Q84[a]	Q85[b]	Q86[c]	Q79[d]	Q80[e]	Public	Academic	Age	Level 7 Master	Level 8.1-8.2 MSc/PhD	$\chi^{2\,h}$
Q39 Tax incentives for investment should be maintained.	0.582 (0.672)	-1.243** (0.593)	1.194** (0.571)	-1.542** (0.777)	-0.466 (0.423)	1.527 (0.979)	2.015*** (0.748)	0.012 (0.019)		-0.454 (0.784)	13.310 (0.149)
Q40 Protective interest (allowance for corporate equity, ACE) should be reintroduced.	-0.149 (0.629)	0.074 (0.43)	0.307 (0.41)	-0.261 (0.394)	-0.353 (0.364)	-0.211 (0.643)	0.316 (0.599)	0.020 (0.015)	-0.044 (0.498)	-0.484 (0.628)	3.929 (0.950)
Q42 Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/ eliminated).	0.429 (0.528)	0.565 (0.381)	-0.882** (0.36)	0.902*** (0.328)	0.060 (0.308)	-0.239 (0.566)	-0.771 (0.527)	<0.001 (0.015)	0.332 (0.469)	0.720 (0.618)	16.966 (0.075)
Q73 A financial transaction tax should be introduced.	-0.009 (0.569)	-0.441 (0.424)	0.330 (0.380)	-0.135 (0.361)	0.857** (0.343)	1.193** (0.546)	0.101 (0.563)	0.035** (0.014)	0.985** (0.465)	1.087* (0.596)	24.790 (0.006)
Q74 A financial activities tax should be introduced.	0.168 (0.653)	-0.971* (0.500)	-0.003 (0.445)	0.150 (0.423)	0.427 (0.375)	3.411*** (0.715)	1.909*** (0.718)	0.037** (0.017)	1.174** (0.546)	0.107 (0.684)	43.793 (<0.001)

	Behavioral responsiveness			Incidence		Sector[f]			Education[g]		
Question/statement	Q84[a]	Q85[b]	Q86[c]	Q79[d]	Q80[e]	Public	Academic	Age	Level 7 Master	Level 8.1-8.2 MSc/PhD	χ^{2} [h]
Q76 General government should be financed less from taxes and more from different non-tax revenues (with an emphasis on different user charges).	0.146 (0.471)	-0.087 (0.374)	0.481 (0.338)	0.054 (0.348)	-0.046 (0.309)	-0.504 (0.601)	-0.102 (0.548)	<0.001 (0.015)	-0.803* (0.438)	-0.918 (0.624)	6.269 (0.792)
Q81 Para-fiscal levies should be reduced.		0.051 (0.862)	1.562*** (0.581)	0.309 (0.663)	0.545 (0.515)	5.182*** (0.832)		0.040 (0.028)	4.872*** (0.728)	4.915*** (1.331)	163.172 (<0.001)

Notes: Robust standard errors are in parenthesis. The p-values of the χ^2 are in brackets. Other regressors include indicators of sector of employment, age and education. Omitted variable dropped from the estimation because model predicts success perfectly.
$^{*} p < 0.1$; $^{**} p < 0.05$; $^{***} p < 0.01$.
a) Q84 – Non taxation of interest encourages saving.
b) Q85 – Non taxation of financial capital gains encourages investment and promotes economic growth.
c) Q86 – Different government tax reductions (reliefs, incentives) promote economic growth.
d) Q79 – Tax burden should be shifted from personal and corporate income to consumption.
e) Q80 – Tax burden should be shifted from personal and corporate income to property.
f) Reference category is private sector.
g) Reference category is Level 4.2-6 according to Croatian Qualification Framework (high school – bachelor).
h) Wald χ^2 tests the hypothesis that at least one of the regression coefficients is not equal to zero.

Source: Authors' calculation.

REFERENCES

1. Alm, J., Martinez-Vazque, J. and Torgler, B., 2006. Russian attitudes toward paying taxes: before, during, and after the transition. *International Journal of Social Economics*, 33 (12), pp. 832-857. doi: 10.1108/03068290610714670
2. Ashworth, J. and Heyndels, B., 1997. Politicians' Preferences on Local Tax Rates: An Empirical Analysis. *European Journal of Political Economy*, 13 (3), pp. 479-502. doi: 10.1016/S0176-2680(97)00015-3
3. Behrens, J. O., 1973. The Public and the Publicans Talk Taxes. *National Tax Journal*, 26 (2), pp. 221-232.
4. Birney, M., Graetz, M. J. and Shapiro, I., 2006. Public opinion and the push to repeal the estate tax. *National Tax Journal*, 59 (3), pp. 439-461.
5. Blažić, H., 2006. *Usporedni porezni sustavi*. Rijeka: Ekonomski fakultet.
6. Blažić, H., Šimović, H. and Štambuk, A. Mjesto socijalne politike u poreznoj politici RH: anketa eksperata, unpublished.
7. Blažić; H, 2008. Croatian Tax System: From Consumption-based to Income-based. In: R. McGee, ed. *Taxation and Public Finance in Transition and Developing Economies*. New York: Springer, pp. 433-459.
8. Brannon, G. M., 1995. What will the "NTA Opinions" have to do with Federal Tax policy – 1995-6. *National Tax Journal*, 48 (1), pp. 149-154.
9. Campbell, A. L., 2009. How Americans Think About Taxes: Lessons from the History of Tax Attitudes. In: *NTA Proceedings of the 102nd Annual Conference on Taxation*, pp. 157-164.
10. DeGroat, B., 2013. What do tax policy experts think about U.S. tax policy? *Michigan News*, University of Michigan's Office of Tax Policy Research and the National Tax Association.
11. Dornstein, M., 1987. Taxes: Attitudes and Perceptions and their Social Bases. *Journal of Economic Psychology*, 8 (1), pp. 55-77. doi: 10.1016/0167-4870(87)90006-7
12. Eicher, J. D. and Stuhldreher, T. J., 2007. Taxes and Ethics: Taxpayer Attitudes Over Time. *Journal of Tax Practice & Procedure*, 9 (3), pp. 33-41.
13. Eicher, J. D., Stuhldreher, W. L. and Stuhldreher, T. J., 2001. Attitudes Toward Income Taxes: Regional vs. National. *Tax Notes*, 90 (8), February 19, 2001.
14. Fatemi, D. J., Hasseldine, D. J. and Hite, P. A., 2008. Resisting Framing Effects: The Importance of Prior Attitude on Estate Tax Preferences. *Journal of the American Taxation Association*, 30 (1), pp. 101-121. doi: 10.2308/jata.2008.30.1.101
15. Fisher, R. D., 1985. Taxes and Expenditure in the U.S. Public Opinion Surveys and Incidence Analysis Compared. *Economic Inquiry*, 23 (3), pp. 525-551. doi: 10.1111/j.1465-7295.1985.tb01782.x
16. Fleishman, G. M. and Hutchison, P. D., 2001. A Tax Reform Conundrum: Insights From A Survey Of Tax Professors. *Journal of Applied Business Research*, 17 (4), pp. 17-29.

17. Green, D. P. and Gerken, A. E., 1989. Self- Interest and Public Opinion toward Smoking Restrictions and Cigarette Taxes. *Public Opinion Quarterly*, 53, pp. 1-16. doi: 10.1086/269138
18. Hammar, H., Jagers, C. J. and Nordblom, K., 2008. Attitudes towards Tax Levels: A Multi-Tax Comparison. *Fiscal Studies*, 29 (4), pp. 523-543. doi: 10.1111/j.1475-5890.2008.00084.x
19. Hasseldine, J. and Hite, P. A., 2003. The Effects of Attribute Framing and Political Party Affiliation on Taxpayer Preferences. *eJournal of Tax Research*, 1 (1), pp. 5-18.
20. Hodžić, J., 2012. *Stimulacija poreznih olakšica za istraživanje i razvoj*. Conference paper. Available at: [http://www.ijf.hr/upload/files/file/javna_potrosnja/Hodzic.pdf].
21. IRS (Internal Revenue Service), 1993. *1990 Taxpayer Opinion Survey Final Report*. Conducted for the IRS by Schulman, Ronca & Bucuvalas, Inc., for Commissioner (Planning and Research), Research Division.
22. Kallbekken, S. and Saelen, H., 2011. Public Acceptance for Environmental Taxes: Self-Interest, Environmental and Distributional Concerns. *Energy Policy*, 39 (5), pp. 2966-2973. doi: 10.1016/j.enpol.2011.03.006
23. Keen, M. and King, J., 2002. The Croatian Profit Tax: An ACE in Practice. *Fiscal Studies*, 23 (3), pp. 401-418. doi: 10.1111/j.1475-5890.2002.tb00066.x
24. Kirchler, E., 1999. Reactance to taxation: Employers' attitudes towards taxes. *Journal of Socio-Economics*, 28 (2), pp. 131-139. doi: 10.1016/S1053-5357(99)00003-7
25. Klemm, A., 2007. Allowances for corporate equity in practice. *CESinfo Economic Studies,* 53 (2), pp. 229-262. doi: 10.1093/cesifo/ifm007
26. Lim, D., Slemrod, J. and Wilking, E., 2013. Expert and public attitudes towards tax policy: 2013, 1994, and 1934. *National Tax Journal*, 66 (4), pp. 775-806.
27. Löfgren, A. and Nordblom, K., 2010. Attitudes towards CO2 taxation – is there an Al Gore effect? *Applied Economics Letters*, 17 (9), pp. 845-848. doi: 10.1080/13504850802584849
28. McCabe, B. C. and Stream, C., 2006. The Chicken or the Egg: A Recent History of public Opinion and tax Reform in Florida. *Journal of Public Budgeting, Accounting & Financial Management*, 18 (2), pp.167-191.
29. McGowan, J. R., 2000. The Effect of Political Affiliation on Taxpayers' Attitudes Toward Alternative Tax Systems. *Journal of the American Taxation Association*, 22 (1), pp. 111-128. doi: 10.2308/jata.2000.22.1.111
30. Murphy, K., 2004. An examination of taxpayers' attitudes towards the Australian tax system: Findings from a survey of tax scheme investors. *CTSI working paper*, No. 46. Available at: [http://regnet.anu.edu.au/sites/default/files/CTSI-WorkingPaper46-full.pdf]. Canberra: Centre for Tax System Integrity, Research School of Social Sciences, Australian National University.

31. Osterloh, S. and Heinemann, F., 2013. The Political Economy of Corporate Tax Harmonization - Why Do European Politicians (Dis)like Minimum Tax Rates? *European Journal of Political Economy*, 29 (C), pp. 18-37. doi: 10.1016/j.ejpoleco.2012.09.002
32. Randlane, K., 2012. Tax Compliance and Tax Attitudes: The Case of Estonia. *Journal of Management and Change*, 29 (1), pp. 89-103.
33. Rose, M. and Wiswesser, R., 1998. Tax reform in transition economies: experiences from Croatian tax reform process in the 1990s. In: P. B. Sørensen, ed. *Public Finance in a Changing World*. London: Macmillan, pp. 257-278.
34. Schmidt, P., Wissel, H. and Stockler, M., 1996. The new Croatian tax system. *Bulletin of International Fiscal Documentation*, 50 (April), pp. 155-163.
35. Šimović, H., 2012. Razvoj poreza na dohodak u Hrvatskoj: reforme i promašaji. *Revija za socijalnu politiku*, 19 (1), pp. 1-24. doi: 10.3935/rsp.v19i1.1045
36. Šimović, H., Blažić, H. and Štambuk, A., 2013. Što porezni stručnjaci misle o poreznom sustavu i poreznoj politici u Hrvatskoj? *Porezni vjesnik*, 22 (12), pp. 31-37.
37. Slemrod, J., 1995. Professional opinions about tax policy: 1994 and 1934. *National Tax Journal*, 48 (1), pp. 121-147.
38. Sokol Šimurina, N. and Bürgler, T., 2012. *Specifičnosti sustava oporezivanja dobiti poduzeća u Republici Hrvatskoj i njihov utjecaj na poreznu konkurentnost.* Conference paper. Available at: [http://www.ijf.hr/upload/files/file/javna_potrosnja/simurina-Buergler.pdf].
39. Švaljek, S., 2005. The 2000 Tax Reform in Croatia: Causes and Consequences. *Ekonomski pregled*, 56 (12), pp. 1217-1236.
40. Švaljek, S., 2012. *R&D tax incentives in Croatia: beneficiaries and their benefits.* Conference paper. Available at: [http://www.ijf.hr/upload/files/file/javna_potrosnja/Svaljek.pdf].
41. Thalmann, P., 2004. The Public Acceptance of Green Taxes: 2 Million Voters Express Their Opinion. *Public Choice*, 119 (1-2), pp. 179-217. doi: 10.1023/B:PUCH.0000024165.18082.db
42. Torgler, B. and Schneider, F., 2005. Attitudes Towards Paying Taxes in Austria: An Empirical Analysis. *Empirica*, 32 (2), pp. 231-250. doi: 10.1007/s10663-004-8328-y
43. Torgler, B. and Schneider, F., 2007. What Shapes Attitudes Toward Paying Taxes? Evidence from Multicultural European Countries. *Social Science Quarterly*, 88 (2), pp. 443-470. doi: 10.1111/j.1540-6237.2007.00466.x
44. Van der Heijden, E., Nelissen, J. and Potters, J., 2007. Opinions on the Tax Deductibility of Mortgages and the Consensus Effect. *De Economist*, 155 (2), pp. 141-59. doi: 10.1007/s10645-007-9061-2
45. Walker, M. L., 1935. Opinion of American Professors of Public Finance on Important Tax Questions as of January 1, 1935. In: *Tax Systems of the World*, edited by Tax Research Foundation. Chicago: Commerce Clearing House, Inc.

Personal income tax reforms and tax progressivity in Slovenia, 1991-2012

TINE STANOVNIK, PhD*
MIROSLAV VERBIČ, PhD*

Article**
JEL: J31, D31
doi: 10.3326/fintp.38.4.3

* The article is based to a large extent on the preliminary version available as a working paper at the Institute of Economic Research in Ljubljana (Stanovnik and Verbič, 2012). The authors are grateful to two anonymous referees for their insightful comments and suggestions. They are also grateful and indebted to Matej Divjak from the Statistical Office of the Republic of Slovenia, to Mojca Centa Debeljak, Tomaž Perše, Jana Ahčin and Branko Gorjan from the Tax Administration of the Republic of Slovenia, and to Stane Gros from the RRC for making this research possible.

** Received: May 19, 2014
Accepted: October 13, 2014

A previous version of this paper was presented at the conference *Tax Reforms: Experiences and Perspectives* organized by the Institute of Public Finance, Faculty of Economics and Business, Zagreb and Faculty of Economics, Rijeka in Zagreb on June 20, 2014.

Tine STANOVNIK
University of Ljubljana, Faculty of Economics & Institute for Economic Research, Kardeljeva ploščad 17, 1000 Ljubljana, Slovenia
e-mail: stanovnikt@ier.si

Miroslav VERBIČ
University of Ljubljana, Faculty of Economics & Institute for Economic Research, Kardeljeva ploščad 17, 1000 Ljubljana, Slovenia
e-mail: miroslav.verbic@ef.uni-lj.si

FINANCIAL THEORY AND PRACTICE
38 (4) 441-463 (2014)

Abstract

Using two different data sets, both derived from the personal income tax files, this paper analyses income inequality and the effects of the personal income tax on after-tax income of employees in Slovenia. It has been shown by using the Kakwani index of progressivity that increases in tax progressivity came in leaps and bounds upon the introduction of new PIT legislation. After the early years of transition (1991-1993), characterized by a large increase in income inequality, the distribution of income has experienced rather small changes; this can be attributed to the introduction of the minimum wage and introduction of a tripartite institution (The Economic and Social Council), responsible for wage negotiations. Inequality of employee's income has even been decreasing since 2005; some of this decrease is due to changes in the tax base, as PIT legislation introduced schedular taxation of capital income in 2005 and differentiated tax allowances in 2008. The share of income accruing to the top 1% of earners has not been increasing, but has been fluctuating, though on a decreasing trend in the last 10 years.

Keywords: income inequality, income distribution, earnings, Slovenia

1 INTRODUCTION

The interest in income inequality is not waning. However, the focus of particular interest has been shifting, as researchers have in recent years devoted much attention to the analysis of the very top of the income distribution, and also by extension of the data series into the distant past. Our analysis does not include "the distant past", but only the period from 1991 onwards. This was the year Slovenia gained independence and introduced its – admittedly short lived – currency, the Slovenian tolar. In 2007, Slovenia joined the eurozone, adopting the euro. The economic and financial crisis hit Slovenia hard, with a large drop in GDP; the growth rates (as published by the Statistical Office and available at www.stat.si) were -7.8% in 2009, 1.2% in 2010, 0.6% in 2011 and 2.6% in 2012. In this sense, the 1991-2012 period was quite eventful. We note that any attempt to extend the analysis further back in time, to cover the pre-1991 period (when Slovenia was a constituent republic of the Yugoslavian federation), would entail insurmountable methodological difficulties. Namely, the socialist system did not recognize the concept of gross income, and there was no personal income tax in the modern sense of the word[1]. Thus, prior to 1991, only summary data on net wages are available.

Our analysis will deal with income inequality in the labour active population, more precisely, of employees. We generally do not use the term "earnings", though more than 95 percent of this income constitutes earnings; a quite small share of income also consists of income from capital. Self-employed persons, persons active in agriculture and other active persons, who do not have employee status, will not be included. Our analysis will take the individual as a statistical unit; we will

[1] Only certain types of income were taxed, i.e. income from contractual work.

not deal with household income. In spite of this "partiality", such an analysis also provides an indication of what was happening at the household level, as wages and salaries account for more than 60 per cent of disposable household income. Changes in the distribution of these incomes also provide a good indication of the trend in the distribution of household incomes. As for the "partiality" of our analysis, we can quote Blinder (1993:308), who wrote, referring to the USA data, that "if you want to understand the rise in income inequality in the 1980s, the place to start is with the rise in wage inequality". To which we might add Atkinson's comment (1998:19): "I agree, but one should not stop here". To which we might further add that Atkinson at times "did stop here" and analyzed the distribution of individual earnings in twenty country members of the OECD (Atkinson, 2008).

We have already mentioned the strong research emphasis on the very top of the income distribution. Recent research by Atkinson, Piketty and Saez (2011), Piketty and Saez (2013), Alvaredo et al. (2013) has not only presented a comparative and historical perspective of changes at the top of the income distribution in a number of developed countries, but has also provided quite plausible explanations as to why the share of income accruing to the top 1% has increased so dramatically in most English-speaking countries. These authors have shown that the tax system is one of the "culprits", as large decreases in the top marginal tax rates have strongly stimulated managers and executives to bargain for higher remuneration, i.e. the rewards for bargaining efforts have significantly increased. They have shown that this increasing share is simply rent extraction, i.e. it was not caused by increases in the productivity of this group. In fact, this recent research, as well as the best-selling book by Piketty (2013), provides a strong theoretical and empirical "indictment" of the economic and financial elite in these countries, particularly in the USA. Viewed in this international context, and considering the above-mentioned research that will doubtlessly have a strong impact on the research agenda for years to come, it is important to analyse and provide plausible explanations for the income inequality dynamics in other countries. These analyses have to be similarly based on high quality data, enabling a thorough analysis of the top of the income distribution. In a sense, the above-cited research provides a broader context for our national research. We also note that our research represents a continuous endeavour, with some results being presented in Stanovnik and Verbič (2005, 2013).

The structure of our analysis is as follows. Section 2 will present both data sources used in our analysis. Section 3 will provide a comparison of average wages from these data sources and from the official source – the Statistical Office of the Republic of Slovenia. In section 4, we will present the structure of gross income of employees: personal income tax (PIT), social security contributions and net income, net income being obtained by subtracting PIT and social security contributions from gross income. The distribution of gross income across income quintiles is presented, as well as the distribution of PIT. We show that the changes in the

FINANCIAL THEORY AND PRACTICE
38 (4) 441-463 (2014)

share of PIT paid, by income quintiles, can clearly be traced to changes in the PIT legislation. This legislation has – through the years – strongly emphasized the lowering of the tax burden for the low-income population. Section 5 is devoted to the analysis of income inequality and the role of the tax system in mitigating the effects of the rise in inequality of the distribution of gross income. Section 6 presents a brief analysis of the dynamics of PIT progressivity, using the Kakwani index as a measure. Section 7 offers some concluding remarks.

2 DATA SOURCES

Our analysis is based on two data sources. Neither of these is available to the general public; they have been acquired (specifically for this research) from the Statistical Office of the Republic of Slovenia (SORS) and the Tax Administration of the Republic of Slovenia (TARS).

Data source A

This data source was obtained from SORS. Using the statistical registry of the labour active population (*Statistični register delovno aktivnega prebivalstva – SRDAP*) and tax file returns from TARS, a population of employees was extracted for each year, satisfying both of the following criteria: (a) employed full-time (meaning that the data in the registry indicate that the person is working at least 36 hours per week), and (b) employed at the same employer throughout the year. The data are delivered in tabular form with 14 income groups. There is differentiation according to the sector of employment (private, public) and gender (male, female), so that there are in effect four tables for each year. The tables include all (itemized) sources of income subject to tax, as well as withheld PIT and employee social security contributions. The tables cover the period from 1993 to 2012.

Data source B

This data source was obtained from TARS. These are actually large random samples extracted from the PIT files, i.e. covering all persons liable for PIT. Each of these annual samples includes about 60,000 taxable persons, representing some 5 per cent of all persons liable for PIT. For the 2005-2012 period, TARS provided an even larger random sample, covering some 10 per cent of persons liable for PIT. Data for each person include the following: age of birth, sex, gross income (for each income source subject to tax), employee social security contributions, withheld PIT and final PIT liability. This data source covers the period from 1991 to 2012.

Both data sources have their "strong" and "weak" selling points. In view of Atkinson's A/B/C classification[2] (Atkinson, 2007; 2008), both sources could be classified in the A group, signifying high quality data. Data source A offers possibilities for comparisons between the public and private sector – something that data

[2] "An A classification denotes data that are most appropriate, B denotes acceptable, if not ideal, data that may be applied *faute de mieux*, and C denotes data that should not be used" (Atkinson, 2008, p.19). A more detailed description of the classification criteria is presented in the source cited above.

source B does not provide. However, data source A starts with 1993, and thus does not cover the most dramatic early period of transition from a socialist to a market economy. In addition, this data source contains only data on withheld PIT and not data on final PIT liability. In view of the described selection rules, data source A contains a fairly homogeneous population of employees.

As data source B represents a random sample of all persons liable for PIT, employees have to be extracted. Furthermore, there is no information on sector of employment (public, private). Additionally, there is no information on the period within the year, during which the income has been earned; source A solves this problem by including only employees who have worked during the whole year. Thus a person could have earned income only during two months and still be included in the PIT file[3]. Needless to say, his annual income (earned during two months) is low as well as his average monthly income. However, the advantage of this data source is that it starts with 1991 and contains data on the final PIT liability. Furthermore, employees whose annual earnings are less than the personal allowance are not required to file a PIT return and are included neither in data source A nor in data source B[4]. As data source B is a sample, the estimated values of various indicators are subject to sampling errors; due to the large samples the estimated standard errors of estimates are rather small.

3 A COMPARISON OF THE AVERAGE WAGE, BASED ON THE DATA SOURCES AND OFFICIAL STATISTICS

In this section, we will provide a comparison of the values of the average wage, based on data source A and data source B. In computing the average monthly wage, data source A does not include employees who have: (a) worked part-time, (b) not worked the whole year, and (c) changed their employer in a given year.

What about data source B? We first extracted employees according to the single criterion that wages and/or wage compensations received by the person in a given year must be positive. In previous research (Stanovnik and Verbič, 2005) we extracted employees according to two cumulative criteria: (a) value of wages and/or wage compensations is positive, (b) value of vacation allowance is positive. We have set the second criterion because the vacation allowance is a statutory element of the labour compensation package, with minimum amounts of these vacation allowances being the result of negotiations between the social partners and spelled out in collective agreements[5]. If the worker is employed part-time, he is entitled to

[3] Of course, this person will be included in the PIT file only if gross annual incomes exceed the amount of the general personal allowance. This allowance is in the form of a deduction.
[4] The personal allowance has been increasing, with particularly large leaps in 2008 and 2010. Thus, in 2010 a person receiving a minimum wage (throughout the year) would still be liable for PIT, but his PIT liability would amount to only some 110 EUR.
[5] There are also strong inducements to disburse only minimum amounts of these vacation allowances. Namely, from 1994 onward amounts of vacation allowance greater than the stipulated minimum amount were subject to corporate income tax. From 1998 onward, values that surpassed the stipulated minimum amount were also subject to social contributions.

receive an appropriate part of the annual vacation allowance[6]. Similarly, if a worker is employed by an employer, e.g. for three months in a year, he is entitled to 3/12 of the minimum amount.

TABLE 1

The average monthly wage according to different data sources (in EUR), 1991-2012

Year	Statistical Yearbook	Data source A	Data source B
1991	495		453
1992	486		431
1993	570	586	516
1994	621	621	545
1995	731	711	634
1996	762	729	658
1997	800	751	682
1998	849	817	727
1999	895	860	770
2000	935	901	808
2001	988	950	851
2002	1,041	1,005	905
2003	1,083	1,063	949
2004	1,120	1,094	986
2005	1,157	1,150	1,052
2006	1,213	1,213	1,116
2007	1,285	1,286	1,184
2008	1,391	1,400	1,286
2009	1,439	1,478	1,319
2010	1,495	1,513	1,368
2011	1,525	1,559	1,378
2012	1,525	1,559	1,396

Source: Statistical Yearbook of the Republic of Slovenia (SORS, 1992-2013); own computations from data sources A and B.

Regardless of these legal obligations, it appears that numerous employers are in breach of the law and do not disburse vacation allowances to their workers; our estimates indicate that some 10 per cent of all workers do not receive these allowances. Excluding this group of workers from our analysis does not seem warranted, in spite of the fact that their wages are quite low and that – in all likelihood – they are being employed part-time and/or for only several months during the

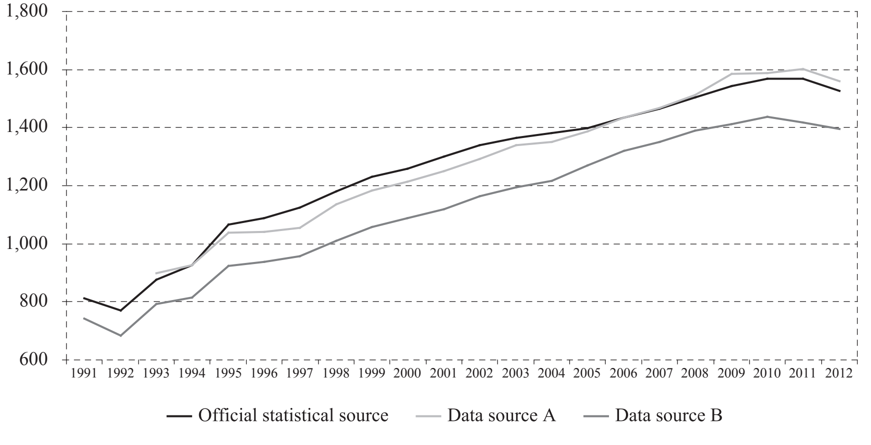
[6] Some categories of part-time workers are entitled to a full vacation allowance. These are workers who are partially disabled and receive part of their wage compensation from the Institute for pension and disability insurance (*Zavod za pokojninsko in invalidsko zavarovanje – ZPIZ*).

year. The inclusion of these workers in the computation of the average wage also results in lower estimates of the average wages.

A comparison of wages includes the values of the official average gross monthly wage, published in the Statistical Yearbook of the Republic of Slovenia, with the computed average gross monthly wage from data sources A and B. It must be noted that the official average gross wage is actually being computed on a subset of all employees. Thus, in 1991 employees in private enterprises and employed by the self-employed were not taken into account. The subset was enlarged in 1992, when employees in larger private enterprises (with at least three employees) were included. Since 2005, all employees in private enterprises have been included in the official calculation of the average wage, so that the only excluded group is of employees working for the self-employed[7]. As a rule, these workers have low reported wages, due to the possibilities for payments to be made in cash. Because this group of workers was excluded from the computation of the official average wage, it is not surprising that the official average wage is somewhat higher than the average wage computed from data source A, as seen from table 1.

Figure 1

The average gross wage (in 2012 prices) in EUR, 1991-2012



Source: Statistical Yearbook of the Republic of Slovenia (SORS, 1992-2013); own computations from data sources A and B.

The lowest estimated values of the average wage are according to data source B. Here, the average monthly wage is computed by dividing the annual value of wages (as specified in the PIT tax form) by 12. Since we do not know how many months the person has actually been working, or whether he has been working

[7] In computing the official average wage, all workers in the above stated subset are included. This means the inclusion of workers working part-time or full-time, workers on a permanent or temporary labour contract. A person who worked only two months would have his average wage computed on the basis of these two months.

FINANCIAL THEORY AND PRACTICE
38 (4) 441-463 (2014)

full-time or part-time, we simply assume that the person has been working full-time during the year.

In spite of these differences in the data sets, we can observe from figure 1 a quite consistent trend for the average wage (in real terms) from all the three statistical sources. The average wage has been steadily increasing (in real terms) since 1992, with the economic and financial crisis resulting in a slight decrease in 2011 and 2012.

4 THE STRUCTURE OF GROSS INCOME: PIT, EMPLOYEE SOCIAL CONTRIBUTIONS AND NET INCOME

Though gross incomes of employees were on the increase in the 1992-2010 period, the increase in their net incomes was even more pronounced, as seen from tables 2 and 3, which show an increasing share of net income in the gross income of employees[8]. As data source A does not contain data on final PIT, the actual net income could not be computed. That is why we refer to "net" income, obtained by subtracting withheld PIT and employee social contributions from gross income. This is seen in table 2. Table 3 is based on data source B; here net income is obtained by subtracting actual PIT paid and employee social contributions from gross income.

As seen from table 3, the share of PIT in the gross income of employees decreased from 14.9 per cent in 1991 to 12.3 per cent in 2012, whereas the share of employee social contributions decreased from 22.9 per cent to 20.1 per cent of gross income in the same time period. Both decreasing shares are due to legislative changes[9]. Decreases in the share of PIT occurred in 1994, 2005 and 2007, i.e. the years when new PIT legislation was introduced. A decreasing share of employee social contributions is visible in the first years of transition, up to 1995, caused by the gradual decrease in the statutory employee social contribution rate, from 24.79 per cent in 1992 to 22.10 per cent in 1995.

In order to provide a better basis for comparison, we also computed the share of withheld PIT in gross income of employees from data source B. A comparison with data source A is provided in figure 2, which, again, shows remarkable congruence.

The period since 1991 witnessed not only large aggregate changes in the PIT burden and (in the initial years) changes in employee social contributions, but also changes in the PIT burden across income groups, as can be observed from tables

[8] Wages account for some 90 per cent of employees' gross income, with vacation allowance accounting for a further 5 per cent.

[9] In principle, the decreasing share of employee social contributions could also have been due to changes in the income composition, say, with an increasing share of income from capital in gross income of employees. This income is not subject to social contributions. However, this was not the case.

4 and 5, with table 4 including only withheld PIT (data source A) and table 5 including final paid PIT (data source B).

Changes in the PIT burden across income groups can occur through several channels: (a) legislative changes in the PIT, which include changes in tax brackets, tax rates and tax reliefs, (b) changes in the income distribution, and (c) indexation rules for tax brackets.

Starting from the third possible cause for changes in the tax burden, i.e. indexation rules, we note that up to 2004, the tax brackets were annually adjusted according to the growth of the average wage. The PIT Act, passed in May 2004 (ZDoh-1, Official Gazette of the Republic of Slovenia 54/2004) changed the indexation rule, so that tax brackets were uprated according to the consumer price index. Such indexation has also been retained by the PIT legislation passed in 2006 (ZDoh-2, Official Gazette of the Republic of Slovenia 117/2006). Thus, a growth of wages higher than the increase in consumer prices would cause a gradual drift of employees into higher tax brackets; this is known as fiscal drag.

Table 2

Withheld PIT, employee social contributions and "net" income as a share of gross income of employees, data source A

Year	Gross income	Withheld PIT	Employee social contributions	"Net" income
1993	1.000	0.140	0.218	0.642
1994	1.000	0.142	0.205	0.654
1995	1.000	0.143	0.200	0.658
1996	1.000	0.146	0.198	0.656
1997	1.000	0.145	0.198	0.657
1998	1.000	0.147	0.202	0.652
1999	1.000	0.148	0.202	0.649
2000	1.000	0.150	0.204	0.647
2001	1.000	0.150	0.204	0.646
2002	1.000	0.151	0.204	0.645
2003	1.000	0.152	0.204	0.644
2004	1.000	0.152	0.203	0.645
2005	1.000	0.142	0.201	0.657
2006	1.000	0.144	0.204	0.653
2007	1.000	0.131	0.204	0.665
2008	1.000	0.134	0.204	0.662
2009	1.000	0.136	0.206	0.658
2010	1.000	0.135	0.206	0.659
2011	1.000	0.137	0.204	0.659
2012	1.000	0.135	0.204	0.662

Note: "Net" income refers to gross income minus withheld PIT minus employee social contributions.

Source: Own computations from data source A.

FINANCIAL THEORY AND PRACTICE
38 (4) 441-463 (2014)

Table 3

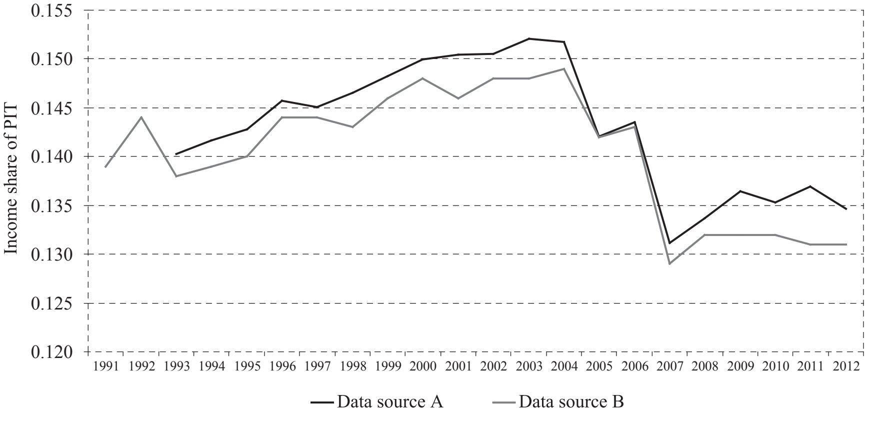
PIT, employee social contributions and net income as a share of gross income of employees, data source B

Year	Gross income	PIT	Employee social contributions	Net income
1991	1.000	0.149	0.229	0.623
1992	1.000	0.146	0.226	0.628
1993	1.000	0.147	0.217	0.636
1994	1.000	0.136	0.203	0.661
1995	1.000	0.139	0.197	0.664
1996	1.000	0.141	0.195	0.664
1997	1.000	0.140	0.195	0.664
1998	1.000	0.138	0.199	0.663
1999	1.000	0.139	0.200	0.661
2000	1.000	0.139	0.200	0.661
2001	1.000	0.138	0.202	0.660
2002	1.000	0.141	0.201	0.658
2003	1.000	0.141	0.201	0.658
2004	1.000	0.143	0.201	0.657
2005	1.000	0.133	0.199	0.668
2006	1.000	0.133	0.201	0.665
2007	1.000	0.126	0.201	0.673
2008	1.000	0.128	0.201	0.672
2009	1.000	0.126	0.203	0.671
2010	1.000	0.125	0.202	0.673
2011	1.000	0.124	0.201	0.675
2012	1.000	0.123	0.201	0.676

Source: Own computations from data source B.

Figure 2

The share of withheld PIT in gross income of employees, 1991-2012



Source: Own computations from data sources A and B.

Table 4
The structure of withheld PIT across income quintile groups, data source A

Year	Lowest 20%	Quintile groups 2 to 4	Highest 20%	Top 5%	Top 1%
1993	7.33	45.64	47.03	21.03	7.34
1994	5.56	41.36	53.08	26.00	9.58
1995	5.48	40.61	53.91	26.55	9.58
1996	5.55	40.15	54.30	26.87	9.76
1997	5.44	39.92	54.63	27.22	10.00
1998	5.47	39.36	55.17	27.70	10.64
1999	5.33	38.82	55.85	28.13	10.78
2000	5.34	39.19	55.47	27.81	10.72
2001	5.42	38.85	55.73	27.67	10.66
2002	5.51	39.22	55.27	27.12	10.59
2003	5.49	39.08	55.43	26.86	10.45
2004	5.69	39.12	55.18	26.48	10.34
2005	4.67	37.73	57.60	27.94	11.06
2006	4.65	38.45	56.91	27.11	10.59
2007	4.85	37.38	57.77	28.78	11.47
2008	4.33	38.00	57.66	28.35	10.92
2009	4.06	39.17	56.77	27.34	10.12
2010	4.21	38.97	56.81	27.07	9.80
2011	4.26	40.15	55.60	26.42	9.65
2012	4.56	40.54	54.90	26.15	9.60

Source: Own computations from data source A.

Changes in the income distribution can also cause changes in the relative tax burden. Thus, the rapid increase in income inequality in 1992 and 1993 resulted in a visible increase in the share of PIT paid by the highest quintile group.

However, there is no doubt that the largest changes in the shares of PIT paid across income groups were due to legislative changes. A "quantum leap" occurred in 1994, when the new PIT legislation entered into force (ZDoh, Official Gazette of the Republic of Slovenia 71/93). This PIT legislation introduced significant changes in the tax brackets and tax rates. However, of particular importance was the introduction of a personal allowance, amounting to 11 per cent of the average national annual wage. Thus, the tax burden of low-income groups decreased, whereas the burden for higher income groups increased.

A further large decrease in the relative tax burden of low-income groups occurred with the passage of the *Law on extraordinary decrease of tax liability* (ZIZDO), passed in May 2000 (Official Gazette of the Republic of Slovenia 44/2000). This law had a retroactive effect for PIT liability for the year 1999, and was also applied for the tax year 2000. It prescribed lower tax liabilities for low-income groups: this was a pre-election manoeuvre by the government of Dr Janez Drnovšek. As this law was of limited duration, and as the elections were won by the party of Dr Janez Drnovšek, there was no strong motivation to extend the law's validity. Thus, in 2001 the relative tax burden of the low-income group (bottom quintile group) returned to its pre-1999 value. Further changes occurred in 2005, when new PIT legislation (ZDoh-1) entered into force; this caused a sizeable increase in the personal allowance. The frenzy continued toward the end of 2005 with the introduction of schedular taxation of most forms of income from capital (Official Gazette of the Republic of Slovenia 115/2005). Interest income, dividends and capital gains were henceforth taxed with a final withholding tax amounting to 20 per cent, and since 2006, these incomes are not included in the PIT tax form.

Table 5

The structure of paid PIT across income quintile groups, data source B

Year	Lowest 20%	Quintile groups 2 to 4	Highest 20%	Top 5%	Top 1%
1991	6.61	49.36	44.03	19.01	6.99
1992	5.60	47.54	46.86	21.62	8.28
1993	5.26	46.73	48.01	22.31	8.37
1994	2.31	39.67	58.02	29.48	11.70
1995	2.37	39.30	58.33	29.50	11.23
1996	2.43	38.15	59.42	30.51	12.03
1997	2.37	37.71	59.93	31.29	12.38
1998	2.43	37.34	60.23	31.66	13.18
1999	1.10	36.71	62.19	33.12	13.51
2000	1.01	36.49	62.49	33.54	14.29
2001	2.30	36.97	60.74	31.25	12.55
2002	2.28	36.46	61.26	31.75	12.89
2003	2.31	36.85	60.84	31.32	13.06
2004	2.34	36.58	61.08	31.91	13.49
2005	1.55	34.42	64.02	33.52	14.08
2006	1.74	35.19	63.07	32.50	13.70
2007	2.01	34.86	63.14	33.44	13.33
2008	0.86	35.01	64.13	33.95	13.63
2009	0.72	35.23	64.04	33.12	13.01
2010	0.37	34.81	64.82	33.73	13.27
2011	0.51	36.11	63.39	32.14	12.09
2012	0.47	35.87	63.67	32.52	12.63

Source: Own computations from data source B.

In 2007, a new PIT Act (ZDoh-2) entered into force (Official Gazette of the Republic of Slovenia 117/2006). It simplified the system by reducing the number of tax brackets from five to three and reduced the top marginal rate from 50 to 41 per cent. Legislative changes continued, and in the beginning of 2008 (Official Gazette of the Republic of Slovenia 10/2008) important changes were introduced, with a differentiated personal allowance; the higher the income, the lower the personal allowance[10]. Quite possibly, the rationale for such a "bizarre" tax allowance, unknown in fiscal doctrine, was the approaching parliamentary elections. Of course, the relative tax burden of the low-income group (bottom quintile group) experienced a further decrease (see also Majcen et al., 2009; Čok, Urban and Verbič, 2013). It is amazing that diminution of the already low tax burden of the low-income groups did not stop here, and in 2010 legislation was passed (Official Gazette of the Republic of Slovenia 13/2010) which significantly increased the tax allowance for the lowest income group. To sum up, the share of PIT paid by these income groups in Slovenia is now at a historic low.

5 INCOME INEQUALITY

Tables 6 and 7 present the distribution of income (of employees) across quintile groups, with table 6 referring to data source A and table 7 to data source B. In both tables, we further divide the top quintile group into the top 5% and top 1% of employees.

Both tables show that the share accruing to the bottom income quintile group has not changed by much, and income share of quintile groups 2 to 4 has somewhat decreased. The share accruing to the top income quintile group has slightly increased. However, these assertions depend on the base year of comparison. If we discard the first three years of transition, i.e. the 1991-1993 period, the changes in the distribution of income are rather small. However, both data sources (A and B) do show some changes at the top of the income distribution. According to data source A, the share of total gross income accruing to the top income quintile group gradually increased in the 1993-1999 period. After that, it was on a declining trend, so that the overall income share of the top quintile group increased by only 0.81 percentage points in the 1993-2012 period. The income share of the top 1 percent increased by 0.32 percentage points in this time period.

A similar trend can be discerned from table 7, which shows the distribution of income of employees according to data source B. According to this data source, the income share of the upper quintile group increased in the 1993-2000 period, followed by declining trend, so that the income share of this income group increased by only 0.83 in the 1993-2012 time period. Similarly, the increases in the income share accruing to the top 1 percent were also small, the overall increase in the 1993-2012 period being only 0.37 percentage points.

Tables 8 and 9 provide summary measures of income inequality, based on data source A and data source B, respectively. We observe that the Gini coefficient based on data source B is consistently higher than the Gini coefficient based on

[10] Taxpayers with an annual gross income up to 6,800 EUR were entitled to a personal allowance (deduction) of 4,959.60 EUR. Taxpayers with an annual gross income from 6,801 to 9,000 were entitled to a personal allowance of 3,959.60 EUR, whereas taxpayers with an annual gross income greater than 9,001 EUR were entitled to a personal allowance amounting to 2,959.60 EUR.

data source A (see also figure 3). This is not surprising, as data source B contains a more heterogeneous group of employees, many of whom have low wages. The narrative of both tables is similar; the Gini coefficient peaked in the late 1990s[11], followed by a declining trend during the 2000s.

Table 6

The structure of gross income of employees, by income quintile groups, data source A

Year	Lowest 20%	Quintile groups 2 to 4	Highest 20%	Top 5%	Top 1%
1993	9.60	52.27	38.13	14.83	4.69
1994	9.66	51.65	38.69	15.76	5.09
1995	9.33	51.40	39.27	16.05	5.08
1996	9.34	51.00	39.66	16.37	5.27
1997	9.16	51.02	39.82	16.50	5.35
1998	9.21	50.58	40.21	16.82	5.66
1999	9.01	50.18	40.81	17.24	5.84
2000	9.06	50.27	40.67	17.05	5.76
2001	9.16	49.93	40.91	17.03	5.75
2002	9.25	50.12	40.63	16.73	5.69
2003	9.23	49.90	40.87	16.75	5.70
2004	9.42	49.73	40.85	16.69	5.72
2005	9.44	49.79	40.77	16.63	5.81
2006	9.48	50.15	40.37	16.13	5.43
2007	9.34	50.08	40.59	16.45	5.75
2008	9.21	50.27	40.51	16.35	5.58
2009	9.00	50.79	40.21	16.03	5.30
2010	9.60	50.49	39.91	15.78	5.11
2011	9.77	50.87	39.37	15.58	5.09
2012	10.03	51.03	38.94	15.37	5.01

Source: Own computations from data source A.

What is the explanation for the large increase in the value of the Gini coefficient in the early 1990s, i.e. in the 1991-1993 period? There is little doubt that wage compression and "egalitarianism" of the socialist and self-management period "broke loose" in these early years, resulting in a significant increase in wage dispersion. This increase can be ascribed also to the poorly regulated (or rather unregulated) institutional setting, so characteristic for the early transition period in many Central and Eastern European countries. Mechanisms for negotiations between social partners were introduced in 1994 – with the formation of the Economic and Social Council, a tripartite body comprising trade union organisations, employer organizations and the government[12] (Štoka-Debevec, 1997:176). An

[11] We do not have a satisfactory explanation for the increase in income inequality in the late 1990s.
[12] Perhaps one could use the term "re-introduced", as the trade unions had a very important role in the socialist and self-managed period.

agreement on wage policy, duly signed by the social partners was also passed in 1994. In 1995, the National Assembly of the Republic of Slovenia (*Državni zbor*) passed a law with a long-winded title, *The law on promulgation of the agreement on wage policy and other labour remuneration and the social compact for 1995 and the setting of minimum and maximum wage* (Official Gazette of the Republic of Slovenia 29/95). This marked the first minimum wage legislation. For the following year, 1996, the minimum wage was stipulated in the social compact and the law on the promulgation of the social compact. Starting from 1997, the minimum wage was set in a special law on the minimum wage. The minimum wage legislation might also have contributed to wage compression in recent years, as the *Law on minimum wage*, passed in February 2010 (Official Gazette of the Republic of Slovenia 13/2010) mandated an important – though gradual – increase in the minimum wage. The increase in the share of income accruing to the bottom quintile group, starting from 2010 (see tables 6 and 7) is – quite possibly – due to this new legislation.

Table 7

The structure of gross income of employees by income quintile groups, data source B

Year	Lowest 20%	Quintile groups 2 to 4	Highest 20%	Top 5%	Top 1%
1991	8.36	54.07	37.57	14.23	4.52
1992	7.64	53.16	39.20	15.58	5.15
1993	7.20	52.79	40.01	16.04	5.25
1994	7.11	52.30	40.59	16.91	5.65
1995	7.20	51.83	40.97	17.09	5.53
1996	7.33	51.05	41.62	17.56	5.87
1997	7.37	50.86	41.77	17.82	5.94
1998	7.46	50.64	41.90	18.00	6.32
1999	7.26	49.99	42.74	18.62	6.41
2000	7.22	49.96	42.82	18.75	6.73
2001	7.51	50.17	42.32	17.90	6.08
2002	7.49	49.81	42.69	18.21	6.24
2003	7.52	49.99	42.49	17.99	6.29
2004	7.58	49.66	42.76	18.34	6.53
2005	7.64	49.84	42.52	18.06	6.35
2006	7.93	49.95	42.12	17.64	6.21
2007	8.14	50.05	41.81	17.45	6.04
2008	8.12	49.95	41.93	17.62	6.13
2009	8.03	50.03	41.93	17.28	5.93
2010	8.29	50.08	41.63	17.25	5.93
2011	8.48	50.63	40.89	16.58	5.48
2012	8.49	50.67	40.84	16.60	5.62

Source: Own computations from data source B.

Table 8

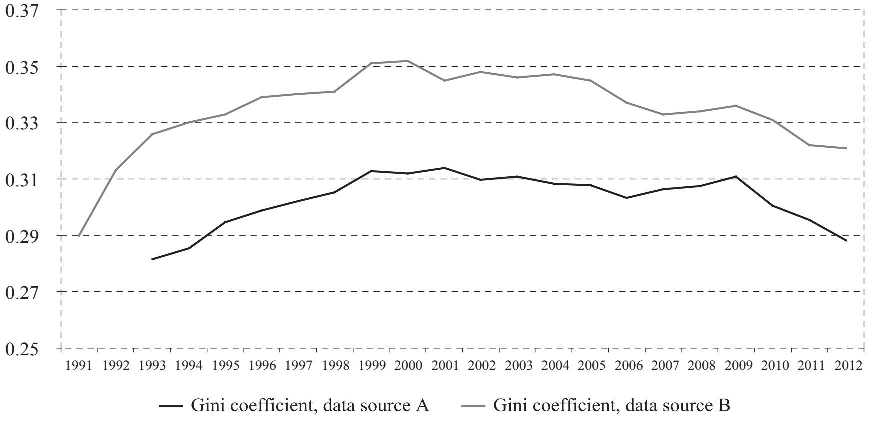
The Gini coefficient for gross income and concentration coefficients for withheld PIT, employee social contributions and "net" income, data source A

Year	Gini coefficient for gross income	Concentration coefficient for withheld PIT	Concentration for employee social contributions	Concentration coefficient for "net" income
1993	0.282	0.389	0.279	0.259
1994	0.285	0.464	0.282	0.248
1995	0.295	0.472	0.293	0.257
1996	0.299	0.476	0.295	0.261
1997	0.302	0.480	0.297	0.265
1998	0.305	0.485	0.302	0.266
1999	0.313	0.492	0.309	0.273
2000	0.312	0.490	0.310	0.272
2001	0.314	0.491	0.312	0.273
2002	0.310	0.486	0.308	0.269
2003	0.311	0.486	0.309	0.270
2004	0.308	0.480	0.303	0.269
2005	0.308	0.514	0.304	0.264
2006	0.303	0.509	0.305	0.258
2007	0.307	0.510	0.307	0.266
2008	0.307	0.515	0.308	0.265
2009	0.311	0.517	0.311	0.268
2010	0.300	0.512	0.301	0.257
2011	0.296	0.504	0.294	0.253
2012	0.288	0.494	0.285	0.247

Source: Own computations from data source A.

Figure 3

The Gini coefficient for gross income of employees, 1991-2012



Source: Own computations from data sources A and B.

Table 9
The Gini coefficient for gross income and concentration coefficients for paid PIT, employee social contributions and net income, data source B

Year	Gini coefficient for gross income	Concentration coefficient for paid PIT	Concentration coefficient for employee social contributions	Concentration coefficient for net income
1991	0.290	0.360	0.285	0.276
1992	0.313	0.395	0.309	0.296
1993	0.326	0.411	0.323	0.307
1994	0.330	0.523	0.330	0.291
1995	0.333	0.525	0.331	0.294
1996	0.339	0.535	0.335	0.298
1997	0.340	0.540	0.335	0.299
1998	0.341	0.541	0.338	0.299
1999	0.351	0.573	0.348	0.305
2000	0.352	0.576	0.350	0.306
2001	0.345	0.547	0.346	0.302
2002	0.348	0.553	0.349	0.304
2003	0.346	0.549	0.346	0.302
2004	0.347	0.552	0.346	0.303
2005	0.345	0.586	0.344	0.297
2006	0.337	0.576	0.342	0.289
2007	0.333	0.572	0.336	0.287
2008	0.334	0.596	0.336	0.284
2009	0.336	0.599	0.339	0.285
2010	0.331	0.614	0.332	0.278
2011	0.322	0.597	0.322	0.271
2012	0.321	0.600	0.317	0.272

Source: Own computations from data source B.

What is the role of PIT and its effect on after-tax income? As seen from tables 8 and 9, the concentration coefficients for net income did not change much in the 1990s, as the increasing inequality in the distribution of gross incomes was – to a very large degree – neutralized by the PIT. Thus, the new PIT legislation applied in 1994 significantly increased the PIT progressivity. Again, the increase in the concentration coefficient for withheld PIT (data source A) in 1994 is much less pronounced than the corresponding increase for paid PIT (data source B).

The new 1994 PIT legislation obviously took everybody by surprise, so that the inequality in the distribution of net incomes of employees – as measured by the concentration coefficient for net incomes – actually decreased in that year; the concentration coefficient for "net" income (data source A) decreased from 0.259 in 1993 to 0.248 in 1994, whereas the corresponding decrease for the concentra-

FINANCIAL THEORY AND PRACTICE
38 (4) 441-463 (2014)

tion coefficient for net income (data source B) was from 0.307 to 0.291. A large increase in the concentration coefficient for paid PIT (series B) is registered in 1999, caused by the aforementioned 2000 *Law on extraordinary decrease of tax liability*. This law reduced the tax liability of low-income groups for 2000 and (retroactively) for 1999. As the law expired in 2001, the concentration coefficient for paid PIT in 2001 returned to its pre-1999 value. Moreover, since it did not require any adjustments in the withholding tax formula, there were virtually no changes in the concentration coefficient for withheld PIT (series A) in those two years, as seen from table 8.

The increase in the concentration coefficient for both withheld PIT and paid PIT in 2005 was the result of a large increase in the personal allowance, introduced by the new PIT legislation (ZDoh-1). Though further new PIT legislation (ZDoh-2), introduced in 2007, did not have an impact on the concentration coefficient for withheld and paid PIT[13], amendments introduced in 2008 (differentiated personal allowance) and 2010 (large increase in the personal allowance for the low-income group) noticeably increased the concentration coefficient for paid PIT (data set B), whereas the effect on the concentration coefficient for withheld PIT (data set A) is negligible. Why? In our view, the cause for this discrepancy is that legislative changes introduced in 2008 and 2010 were – to a large degree – not taken into account in setting the amount of withheld PIT. However, unlike the 2000 *Law on extraordinary decrease of tax liability*, where a blanket rule applied that the legislative change was not taken into account in setting the amount of individual withheld PIT, here taxable persons could opt-out and declare that they did not wish the favourable personal allowance to apply[14].

6 THE DYNAMICS OF TAX PROGRESSIVITY

The personal income tax is a progressive tax, meaning that high-income persons pay relatively more tax than low-income persons. Formally, progressivity means that the average tax rate is an increasing function of income, i.e. that the expression:

$$\frac{d}{dY}\left(\frac{T}{Y}\right) \tag{1}$$

is positive. A negative value would imply that the tax is regressive and a value of zero would imply that the tax is proportional. Here T denotes tax liability, which is a function of income Y. This measure was mentioned by Pigou (1928) and analytically used on U.S. income tax data by Musgrave and Thin (1948). The discrete

[13] The explanation for this "surprising" result is given in section 6.

[14] Annual PIT reports of the TARS, as well as an analysis based on data set B, show large increases in the difference between final PIT liability and withheld tax in 2008 and 2010. This gap was due mostly to large increases of tax refunds disbursed by the TARS to taxpayers. It was particularly pronounced for the low-income groups. Obviously, low-income taxpayers – for various reasons – opted for a less favourable personal allowance used in computing the amount of withholding PIT. Thus, for the bottom quintile group of taxpayers, tax refunds (as percentage of withheld PIT) were: 30.4% in 2006, 27.6% in 2007, 59.5% in 2008, 63.4% in 2009, 80.2% in 2010, 76.7% in 2011, and 77.3% in 2012.

FINANCIAL THEORY AND PRACTICE
38 (4) 441-463 (2014)

variant of the above definitional formula can be used not only for the analysis of a single income tax schedule, but also to analyse changes in the personal income tax schedules. Thus, the discrete variant of this measure uses two points on the same curve (to analyse progressivity of a given personal income tax schedule) or two points on two different curves (to analyse changes in tax progressivity when changes in the personal income tax have occurred). This measure, as well as other measures derived from this "definitional" measure of tax progressivity, is not an aggregate measure, though Musgrave and Thin (*op. cit.*) did propose one such aggregate measure[15].

Most aggregate measures of tax progressivity rely on Lorenz-type curves. One such measure is the Reynolds and Smolensky (1977) index, defined as:

$$RS = G_x - C_N^x , \tag{2}$$

where G_x is the Gini coefficient for gross (i.e. pre-tax) income and C_N^x is the concentration coefficient for net (after-tax) income. The other measure was suggested by Kakwani (1977) and has the following form:

$$K = C_t^x - G_x , \tag{3}$$

where C_t^x is the concentration coefficient for taxes. The Kakwani index of progressivity has some desirable features (*cf.* Kakwani, 1977; Creedy, 1999). Namely, the Reynolds-Smolensky index measures the vertical equity effect of the tax system, and this effect depends not only on the concentration of tax payments, but also on the average tax rate. The Kakwani index however does not depend on the "size" of the tax system, but measures only the extent of tax progressivity. It can easily be shown[16] that:

$$RS = \frac{t}{1-t} K , \tag{4}$$

where t is equal to the average tax rate. Denoting by G_N the Gini coefficient for net (i.e. after-tax) income and by R the Atkinson-Plotnick reranking effect, equal to $G_N - C_N^x$, the following relation holds:

$$G_x - G_N = RS - R. \tag{5}$$

This relation presents the decomposition of the redistributive effect of the tax into a component due to tax progressivity and component due to reranking. Čok and Urban (2007) analysed such a decomposition based on Slovene and Croatian PIT data[17]. Our analysis will however be confined to the Kakwani index, with a further

[15] See Musgrave and Thin (1948, p. 510). It is equal to $(1 - G_N) / (1 - G_x)$, where G_N and G_x are Gini coefficients for gross (pre-tax) and net (after-tax) income, respectively.
[16] This can be directly derived from Rao's identity.
[17] They have actually further decomposed the term R from expression.

FINANCIAL THEORY AND PRACTICE
38 (4) 441-463 (2014)

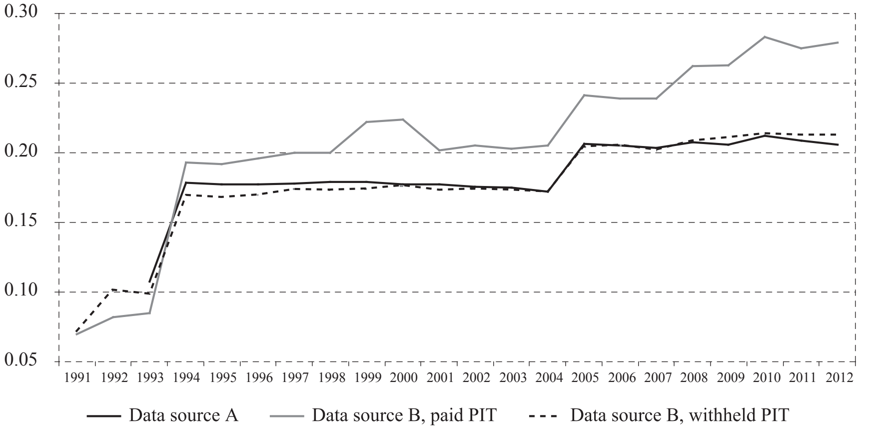
restriction that this index will be computed by considering only personal income taxes. This will be done in order to highlight the dynamics of PIT progressivity[18].

The Kakwani index of progressivity, depicted in figure 4, is computed using three different data sets. The value of the index based on data from data source A is computed using the withheld PIT, whereas the value of the index based on data source B will be computed using (a) withheld PIT, and (b) final PIT liability.

Computation with option (a) will provide yet another opportunity to compare the values obtained from data sources A and B. As seen from figure 4, the values of the Kakwani index for withheld PIT based on data sources A and B are quite comparable. Of course, the Kakwani index computed using paid PIT is consistently higher than the index computed using withheld PIT, as the data of the Tax Administration of the Republic of Slovenia show that tax refunds are strongly concentrated among low-income groups, and additional tax payments are, likewise, strongly concentrated in higher income groups.

Figure 4

Kakwani index of progressivity, 1991-2012



Note: Kakwani index of progressivity based on data source A is computed using only the concentration coefficient for withheld PIT. For data source B the index is computed using: (a) withheld PIT, and (b) paid PIT.

Source: Own computations from data sources A and B.

The Kakwani index increased by leaps and bounds; these leaps and bounds occurred in the years of introduction of new PIT legislation. Thus, the first big leap occurred in 1994, when the new PIT legislation (ZDoh) replaced the 1991 Personal Income Tax Act. The second leap in this index occurred in 1999, when the

[18] Such a "partial" computation of the Kakwani index, without taking into account employee social security contributions, prevents the use of any decomposition measures. Also, the relation between the Reynolds-Smolensky index and the Kakwani index obviously do not hold for such a "partially" computed Kakwani index.

Law on extraordinary decrease of tax liability decreased the PIT tax liability for low-income groups. Upon expiration of this law, the Kakwani index fell "back into line". A further increase in this index occurred in 2005, when the new PIT Act (ZDoh-1) came into force.

It is quite interesting to observe that the PIT legislation which came into force in 2007 (ZDoh-2) did not have an impact on the Kakwani index, although the marginal tax rate was lowered from 50 per cent to 41 per cent. A more detailed comparison of the PIT burden according to the PIT parameters, valid in 2006, and new parameters applied in 2007 (ZDoh-2) shows that inframarginal rates were reduced, but marginal rates for the upper end of the income distribution were increased. The net summary effect of these changes on the Kakwani index was negligible. Finally, the introduction of a differentiated personal allowance in 2008 and a large increase in the personal allowance for the low-income group in 2010 resulted in leaps in tax progressivity in these two years.

7 CONCLUDING REMARKS

Our analysis, based on incomes of employees, as reported in the personal income tax returns, has shown that income inequality increased in the very first years of transition, i.e. the early 1990s. Starting from 1994, when the institutional setting – the Economic and Social Council, collective agreements and legislation on minimum wages – were firmly established, the increases in inequality were quite modest. And not only that; the increases in the inequality of net incomes were virtually negligible, due to the strong mitigating effect of personal income tax legislation. In other words, the tax system acted as an effective brake, preventing the increases in inequality of gross incomes to be transmitted to increases in inequality of net incomes.

The low and stable income inequality in Slovenia is quite remarkable, considering the large social, economic and institutional changes, with the more recent years characterized by a large drop in GDP and a discredited political and economic elite. Could this stability be due also to a large – and strongly wage-regulated - public sector, which could act as a "wage-setter" also for the private sector? This is certainly one of the research questions which would be worth exploring in the future.

REFERENCES

1. Alvaredo, F. [et al.], 2013. The Top 1 Percent in International and Historical Perspective. *The Journal of Economic Perspectives,* 27(3), pp. 3-22. doi: 10.1257/jep.27.3.3
2. Atkinson, A., 1998. The Distribution of Income in Industrialized Countries. In: *Income Inequality: Issues and Policy Options, a Symposium Sponsored by the Federal Reserve Bank of Kansas City.* Kansas City, MO: The Federal Reserve Bank of Kansas City, pp. 11-32.
3. Atkinson, A., 2007. The Long Run Earnings Distribution in Five Countries: "Remarkable Stability", U, V or W? *Review of Income and Wealth*, 53(1), pp. 1-24. doi: 10.1111/j.1475-4991.2007.00215.x
4. Atkinson, A., 2008. *The Changing Distribution of Earnings in OECD Countries*. Oxford: Oxford University Press. doi: 10.1093/acprof:oso/9780199532438.001.0001
5. Atkinson, A., Piketty, T. and Saez, E., 2011. Top Incomes in the Long Run of History. *Journal of Economic Literature*, 49(1), pp. 3-71. doi: 10.1257/jel.49.1.3
6. Blinder, A. S., 1993. Comment. In: D. B. Papadimitriou and E. N. Wolff, eds. *Poverty and Prosperity in the USA in the Late Twentieth Century.* Basingstoke: Macmillan.
7. Čok, M. and Urban, I., 2007. Distribution of Income and Taxes in Slovenia and Croatia. *Post-Communist Economies*, 19(3), pp. 299-316. doi: 10.1080/14631370701503406
8. Čok, M., Urban, I. and Verbič, M., 2013. Income Redistribution Through Taxes and Social Benefits: The Case of Slovenia and Croatia. *Panoeconomicus*, 60(5), pp. 667-686. doi: 10.2298/PAN1305667C
9. Creedy, J., 1999. Taxation, Redistribution and Progressivity: An Introduction. *Australian Economic Review,* 32(4), pp. 410-422. doi: 10.1111/1467-8462.00130
10. Kakwani, N. C., 1977. Measurement of Tax Progressivity: An International Comparison. *The Economic Journal*, 87(345), pp. 71-80. doi: 10.2307/2231833
11. Majcen, B. [et al.], 2009. The Income Tax Reform in Slovenia: Should the Flat Tax Have Prevailed? *Eastern European Economics*, 47(5), pp. 5-24. doi: 10.2753/EEE0012-8775470501
12. Musgrave, R. A. and Thin, T., 1948. Income Tax Progression, 1929-48. *Journal of Political Economy*, 56(6), pp. 498-514. doi: 10.1086/256742
13. Pigou, A. C., 1928. *A Study in Public Finance.* London: Macmillan.
14. Piketty, T. and Saez, E., 2013. Top Incomes and the Great Recession: Recent Evolutions and Policy Implications. *IMF Economic Review,* 61(3), pp. 456-478. doi: 10.1057/imfer.2013.14
15. Piketty, T., 2013. *Capital in the Twenty-First Century.* Harvard University Press.

16. Reynolds, M. and Smolensky, E., 1977. *Public Expenditures, Taxes, and the Distribution of Income: The United States 1950, 1961, 1970*. New York: Academic Press.
17. Stanovnik, T. and Verbič, M., 2005. Wage and Income Inequality in Slovenia, 1993-2002. *Post-Communist Economies*, 17(3), pp. 381-397. doi: 10.1080/14631370500204412
18. Stanovnik, T. and Verbič, M., 2012. The Distribution of Wages and Employee Incomes in Slovenia, 1991-2009. *Working Paper,* No. 60. Ljubljana: Institute for Economic Research.
19. Stanovnik, T. and Verbič, M., 2013. Earnings Inequality and Tax Progressivity in Slovenia, 1991-2009. *Acta Oeconomica*, 63(4), pp. 405-421. doi: 10.1556/AOecon.63.2013.4.1
20. Štoka-Debevec, M., 1997. Plačna politika od leta 1990 dalje ter razlogi zanjo. *Slovenska ekonomska revija*, 48(1-2), pp. 166-184.

Legislative proposal for a controlled foreign companies regime in Poland from an international perspective

MAGDALENA MAŁGORZATA HYBKA, PhD*

Preliminary communication**
JEL: H25, H26
doi: 10.3326/fintp.38.4.4

* The author would like to thank three anonymous referees for their useful comments and suggestions.
** Received: May 19, 2014
Accepted: October 13, 2014

A previous version of this paper was presented at the conference *Tax Reforms: Experiences and Perspectives* organized by the Institute of Public Finance, Faculty of Economics and Business, Zagreb and Faculty of Economics, Rijeka in Zagreb on June 20, 2014.

Magdalena Małgorzata HYBKA
Poznan University of Economics, Department of Public Finance, Al. Niepodległości 10, 61-875 Poznań, Poland
e-mail: malgorzata.hybka@ue.poznan.pl

FINANCIAL THEORY AND PRACTICE
38 (4) 465-487 (2014)

Abstract

Tackling corporate profit shifting requires appropriate anti-avoidance measures. This article reviews one of these measures, a controlled foreign companies (corporations) regime. It has been implemented in many countries, in some of them as early as the 1960s. The need for its introduction has also been expressed on many occasions by the Polish legislator. The article is composed of three sections. The first considers the reasons for the implementation of the analyzed regime. The second describes the controlled foreign corporation legislation in the USA and selected European Union member states. The last section is devoted to a bill on taxing controlled foreign companies in Poland.

Keywords: controlled foreign company, tax avoidance, Poland

1 INTRODUCTION

Corporate income tax avoidance is a common phenomenon all over the world. It usually takes the form of profit shifting between companies operating in countries imposing relatively high corporate income tax rates and those located in tax havens, and brings about a substantial loss of tax revenue. With the spread of multinational companies, counteracting this phenomenon is more and more becoming a burning issue for the public administration of the former transition economies.

Amongst the anti-avoidance measures applied by different countries, controlled foreign company (corporation) legislation is one of the most popular and considered the most effective. The CFC regulations empower a country to impose taxation on income created by foreign entities controlled by resident taxpayers (usually corporations but in some countries also individuals). They are intended to counter tax avoidance by discouraging the migration of passive income[1] to non-resident companies. The adoption of such regulations was recommended by the OECD in its report *Harmful Tax Competition: An Emerging Global Issue* in 1998. The possibility is also included in the draft of the *Directive on a Common Consolidated Corporate Tax Base* proposed by the European Commission.

The controlled foreign companies regime, first applied in the United States, has been implemented in many OECD countries and in such European Union member states as France, Germany, Italy and the United Kingdom. From January 1, 2015 CFC rules will also be a part of Polish tax legislation. According to the new regulations taxpayers are obliged to declare in their yearly tax returns the income of the foreign companies controlled by them which are resident in certain tax havens or other statutorily defined territories. This income will be subject to personal income or corporate income taxation under certain conditions.

[1] Passive income refers to income that can be earned without active participation. It may include inter alia: interest, dividends, rents, royalties, amounts received from personal service contracts and income received as a beneficiary of an estate or trust. Such income is geographically mobile and usually more susceptible to international tax avoidance schemes. Each of the jurisdictions applying CFC rules may use a different catalogue of passive income items.

The basic aim of this article is to evaluate the legislative proposal for a CFC regime in Poland. To achieve this objective the article consists of three parts. It starts with an explanation of the motives for the introduction of CFC rules and arguments both in favour of and against their adoption, continues with an overview of CFC regulations already in place in the USA and selected European Union member states. The last part addresses the legislative proposal for CFC regulations in Poland.

2 RAISON D'ÊTRE OF CONTROLLED FOREIGN COMPANIES REGULATIONS

Preferential taxation offered by tax havens contributes to a significant decrease in public revenue in welfare states not engaged in harmful tax competition. This decrease of revenue is the result of tax avoidance schemes involving the shifting of profit between capital-related companies located in different tax jurisdictions. The shifting of profit is also accompanied by its retention in tax havens.

In spite of numerous attempts made to estimate the scale of this revenue loss it is not precisely known. Many of these estimations concern the tax avoidance strategies of American enterprises. One of the authors analysing the issue is J. G. Gravelle. In his publication he gives an insight into the potential magnitude of the revenue loss due to profit shifting and points out, for example, that eliminating this phenomenon would make it possible to lower the maximum rate of corporate income tax in the USA from 35% to 28% or would feed the American budget with an additional revenue of about 14 billion USD a year (2013:17).

The review of publications devoted to the problem of profit shifting to tax havens is included in the 2013 study of the OECD (2013:61-67). The study refers to analyses applying different methods and using different data sources in order to assess the scale of the phenomenon, including analyses taking into account the differences in effective tax rates imposed on international enterprises in particular jurisdictions or statistical data coming from tax returns. For example, the research conducted by the Citizens of Tax Justice in cooperation with the Institute on Taxation and Economic Policy in the USA in 280 large American enterprises chosen from the *Fortune 500* list shows that the effective tax rate for these enterprises in 2008-2010 was only 18.5%, while the statutory tax rate for corporations in the USA is 35% (McIntyre et al., 2011:3).

More insight into the scale of this phenomenon may come also from an analysis of foreign direct investment in tax havens and foreign direct investment placed by residents of tax havens. The aforementioned study of the OECD includes information that the share of foreign direct investment received by three jurisdictions regarded as tax havens – Barbados, Bermuda and the British Virgin Islands – in the total value of foreign direct investment in 2010 – was higher than the FDI in Germany or Japan. A similar situation was reported with respect to foreign direct investment coming from these jurisdictions. The British Virgin Islands were second in the ranking of the greatest investors in China, after Hong Kong and before the USA. Bermuda ranked third, as one of the largest investors in Chile and Mauritius ranked first – as the leading investor in India (OECD, 2013:17). Hence it appears interesting to ask if the phenomenon of profit shifting to tax havens also involves Polish enterprises and if it does – to what extent?

According to the data published by the Polish Ministry of the Economy, most foreign direct investment comes to Poland from member states of the European Union (---, 2014:12). These countries cumulatively represented nearly 87.7% of direct investment stock at the end of 2012. In the years 2008-2012 the Netherlands, Germany, France and Luxembourg were the four largest country sources of FDI (table 1). Together, these four economies alone accounted for nearly 52.4% of total FDI stock in Poland at the end of 2012.

Polish foreign direct investments were also located mostly in other EU member states (NBP, 2014:12). However the geographic structure of the location of Polish foreign direct investments is different (table 3). In 2012, Polish enterprises invested the most in the Netherlands, France and Cyprus (table 2). In 2009-2011, other popular investment locations for Polish enterprises were Switzerland, Luxemburg, UK, USA and Belgium. In 2012, however, much of the Polish capital was withdrawn from Switzerland, Luxembourg and Sweden. In the years 2010-2012 the highest outflow of Polish FDI was recorded in the case of Switzerland. This fact could be related to the declining attractiveness of Switzerland for European investors in this period. Due to the exponential rise of the franc against the euro and the dollar and weak growth in export markets, 2012 was the worst year for foreign direct investment in Switzerland since 2005. The attractiveness of Luxembourg for Polish investors could have been influenced by the amended Luxembourg-Poland double tax treaty in 2012. The amendments removed tax benefits previously available to Polish residents with respect to dividend income, widened the scope of information exchange between Luxembourg and Poland and introduced a new provision denying the benefits of the treaty in case of the existence of an artificial arrangement.

Despite investment outflow at the end of 2012, Luxembourg had the biggest share of Polish FDI abroad. It accounted for 21.8% of total Polish FDI outward stocks. Other significant countries for the location of Polish FDI stocks were Cyprus, UK, Netherlands and Switzerland. The data presented in table 3 indicate that low tax rate countries (Cyprus, Luxembourg, Netherlands and Switzerland) accounted for 46.7% of total Polish outward FDI stock in 2012. This share decreased in the years 2008-2012 by 6.4 percentage points but is still extremely high.

Table 1

Foreign direct investment in Poland (inward stocks) in the period 2009-2012 (million EUR; top ten countries; as of 31/12 each year)

No.	2008		2009		2010		2011		2012	
	Country	Total FDI inward stock	Country	Total FDI inward stock	Country	Total FDI inward stock	Country	Total FDI inward stock	Country	Total FDI inward stock
1	Netherlands	22,048.3	Netherlands	22,908.0	Netherlands	29,242.8	Netherlands	23,889.0	Germany	26,897.6
2	Germany	18,145.3	Germany	20,832.6	Germany	21,220.2	Germany	21,482.0	Netherlands	26,285.4
3	France	12,463.1	France	14,315.9	France	19,374.9	France	18,676.3	France	21,938.4
4	Luxembourg	10,019.8	Luxembourg	11,121.7	Luxembourg	13,435.8	Luxembourg	17,733.7	Luxembourg	18,222.8
5	USA	7,100.0	USA	8,410.2	Italy	10,557.2	Sweden	9,203.4	Italy	9,982.9
6	Sweden	5,276.4	Sweden	6,399.4	USA	9,450.6	Spain	8,814.1	Spain	9,703.8
7	UK	4,408.6	Italy	5,210.4	Switzerland	6,797.9	Italy	8,207.9	Sweden	8,363.6
8	Italy	4,308.9	Austria	4,719.5	UK	6,220.2	USA	7,148.6	USA	8,129.9
9	Austria	4,116.5	UK	4,661.4	Sweden	6,193.0	UK	6,032.8	UK	7,540.9
10	Belgium	3,784.6	Spain	4,160.1	Austria	5,085.7	Austria	5,279.1	Austria	6,070.3
11	**Total world**	**115,708.9**	**Total world**	**128,834.3**	**Total world**	**161,377.7**	**Total world**	**157,151.1**	**Total world**	**178,256.7**

Source: Own compilation based on: NBP (2009b:59-64;2010b:30-35; 2011b:4; 2012b:4; 2013b:4).

Table 2

Polish direct investment outflows abroad in the period 2009-2012 (million EUR; top five countries for outflows and withdrawals)

No.	Capital outflows and withdrawals	2009		2010		2011		2012	
		Country	Total FDI outflow/ withdrawal	Country	Total FDI outflow/ withdrawal	Country	Total FDI outflow/ withdrawal	Country	Total FDI outflow/ withdrawal
1	Outflows	Luxembourg	927.1	UK	2,441.2	Luxembourg	2,909.9	Netherlands	574.2
2		Belgium	800.2	Luxembourg	1,734.7	Cyprus	1,296.5	France	329.3
3		Switzerland	757.2	USA	723.8	France	416.6	Cyprus	296.9
4		Norway	309.7	Cyprus	717.9	Lithuania	266.0	Germany	223.7
5		Germany	124.1	Belgium	544.6	USA	230.1	USA	221.7
1	Withdrawals	Croatia	-10.5	Switzerland	-1,329.9	Sweden	-156.8	Luxembourg	-715.7
2		Romania	-8.8	Cayman Islands	-425.9	Vietnam	-52.8	Switzerland	-647.1
3		Belarus	-8.2	Hong Kong	-169.4	Switzerland	-48.9	Sweden	-489.0
4		Italy	-6.4	Russian Federation	-167.8	British Virgin Islands	-24.5	UK	-126.3
5		Egypt	-5.7	Sweden	-95.4	Netherlands	-18.2	Czech Rep.	-86.6

Source: Own compilation based on: NBP (2010:4-7; 2011:2; 2012:2; 2013:2).

TABLE 3

Polish direct investment outward stocks in the period 2008-2012 (million EUR; top ten countries; as of 31/12 each year)

	2008		2009		2010		2011		2012	
No.	**Country**	**Total FDI outward stock**	**Country**	**Total FDI outward stock**	**Country**	**Total FDI outward stock**	**Country**	**Total FDI outward stock**	**Country**	**Total FDI outward stock**
1	Switzerland	3,482.4	Switzerland	4,665.4	Luxembourg	6,758.2	Luxembourg	9,101.2	Luxembourg	9,471.8
2	Luxembourg	3,360.7	Luxembourg	4,078.3	UK	4,191.6	UK	4,386.6	Cyprus	4,450.2
3	Netherlands	1,355.5	Netherlands	1,599.6	Netherlands	2,359.6	Switzerland	3,806.0	UK	4,396.8
4	Czech Rep.	972.1	Czech Rep.	1,054.8	Switzerland	2,285.8	Cyprus	3,324.8	Netherlands	3,224.3
5	UK	802.6	UK	904.8	Czech Rep.	1,807.8	Netherlands	2,641.7	Switzerland	3,145.6
6	Lithuania	731.0	Lithuania	856.0	Belgium	1,707.4	Belgium	2,121.1	Belgium	2,283.2
7	Germany	591.4	Belgium	820.1	Lithuania	1,630.2	Lithuania	1,919.8	Czech Rep.	1,976.1
8	Russian Federation	497.4	Norway	760.3	Germany	1,563.0	Czech Rep.	1,904.6	Germany	1,955.1
9	Ukraine	462.9	Germany	741.1	USA	1,470.1	Germany	1,735.9	Lithuania	1,876.3
10	Norway	384.9	Cyprus	573.0	Cyprus	1,428.9	USA	1,563.2	USA	1,531.7
11	**Total world**	**15,983.0**	**Total world**	**17,030.3**	**Total world**	**33,264.0**	**Total world**	**40,887.6**	**Total world**	**43,492.2**

Source: Own compilation based on: NBP (2009:59-62; 2010:28-31; 2011:4; 2012:4; 2013:4).

A significant part of the Polish capital invested in Luxemburg, Switzerland and Cyprus in the years 2008-2012 were cash flows (*Projekt z dnia 30 kwietnia 2013 r.,* 2013:13). Some large Polish enterprises operate within holdings, whose companies are registered in these countries. According to the Polish National Bank (NBP) in 2011 income from the capital of enterprises from their investments in Luxemburg, Switzerland and Cyprus equalled 300.3 million euro, 116.8 million euro and 410.5 million euro, respectively. In the case of Switzerland, Luxemburg, the Netherlands and Belgium, it is difficult to talk about Polish foreign investment in the traditional sense, i.e. involving, for example, takeovers of foreign enterprises or the purchase of a significant number of shares. Companies registered in these countries also invest resources in other jurisdictions but statistics are limited to the recording of the first transaction, ignoring the issues of the target location of the investment. The high position of Cyprus and Luxembourg in the ranking of countries most often chosen by Polish investors is due to the good conditions for businesses these countries offer to foreign investors, mostly in the form of preferential tax treatment. Foreign entities investing in Cyprus often locate their holding companies there.

The scale of the phenomenon of shifting profit to tax havens and retaining it there depends to some extent on the tax residence law of a given country and the methods applied for avoiding double taxation of the foreign income (the design of double tax treaties). In Poland, the Personal Income Tax Act and the Corporate Income Tax Act make legal distinctions between unlimited and limited tax liability (*Ustawa z dnia 26 lipca 1991 r.; Ustawa z dnia 15 lutego 1992 r.*). Pursuant to Article 3 of the first of these acts natural persons, if they are residents on Polish territory, are subject to tax liability on their total income regardless of the location of the source of this income. At the same time a resident on Polish territory is defined as a natural person (individual) meeting one of the following conditions:

– having the centre of his/her personal or economic interest (the centre of vital interests) on the territory of the Republic of Poland, or
– having been resident on the territory of the Republic of Poland for more than 183 days in a fiscal year.

At the same time natural persons who are not domiciled in Poland are subject to the tax liability only on income generated on Polish territory.

Relevant regulations concerning legal persons are included in Article 3 of the Act on Corporate Income Tax according to which taxpayers who have their location (seat) in the territory of Poland are subject to tax liability on the totality of their income, regardless of where it comes from. Taxpayers who do not have a location (seat) in the territory of Poland are liable to pay tax only on income generated in the territory of Poland. The Act on Corporate Income Tax does not contain a definition of location (seat) so according to the provisions of the Article 41 of the Civil Code (*Ustawa z dnia 23 kwietnia 1964 r.*) if no act or articles of association based upon this act provide otherwise, the location of a legal person is the location of its managing body (Gajewski, 2009:28).

The income of a subsidiary located in a different country from that of its shareholder (whether a natural or a legal person) is taxed in the country of its location. The income of this subsidiary is usually taxed in the country of tax residence of the shareholder only if it is paid in the form of a dividend or comes from the sale of the subsidiary's assets due to its liquidation. This principle also applies to subsidiaries of Polish legal persons. The institution of a controlled foreign company makes it possible to tax income earned in tax havens, even when it is not distributed in the form of dividends. Therefore the CFC is an important instrument to limit the scale of tax avoidance. The proposal to introduce CFC rules in Poland is just one of many measures which over the last twenty years have been taken by the Ministry of Finance in order to restrain the erosion of the income tax base. Transfer pricing regulations play the primary role in counteracting profit shifting practices. In Poland, methods for the determination of the arm's length price have been regulated since 1st January 1997 by Article 25 of the Personal Income Tax Act and Article 11 of the Corporate Income Tax Act. The statutory requirements for transfer pricing documentation were introduced in 2001 and a formal Advance Pricing Agreement programme entered into force in 2006. Polish regulations in this regard are based on OECD guidelines and are especially concerned with transfer pricing methods.

Notwithstanding the existence of transfer pricing regulations it is still possible for profit to build up in sales and distribution subsidiaries located in countries offering preferential tax treatment (Prebble, 1987:22). As transfer pricing rules are not capable of tackling international tax avoidance, particularly of solving the problem of tax deferral, special anti-abuse provisions are necessary. In Poland, other anti-tax avoidance measures introduced cover inter alia: the modification of double taxation agreements (for example, the removal of the tax sparing clause in the agreements with Cyprus, Luxemburg, the Czech Republic, Malta, Singapore, Malaysia and the adjustment of agreements with Switzerland, Canada, and Austria to the current OECD standard). Moreover the Ministry of Finance is considering the introduction of a General Anti-Abuse Rule (GAAR) (from 1st January 2015).

The implementation of controlled foreign company regulations is likely to contribute to an increased public revenue through limiting the scale of tax avoidance. However it must be noted that the adoption of anti-avoidance provisions may have some negative consequences. Such provisions are, inter alia, taken into account by investors when assessing the investment climate of a country. CFC rules are one of the factors included whilst calculating tax attractiveness indices (Keller and Schanz, 2013:340). Hence these indices reflect the tax planning opportunities offered by a jurisdiction: countries with CFC rules are perceived to be less attractive than the countries without them. This means that the implementation of CFC regulations may lower the relative attractiveness of Poland for foreign investors.

Moreover CFC regulations are sometimes claimed to hinder the free movement of capital and severely affect foreign operations of MNEs. In addition, CFC rules may increase the compliance costs of multinational enterprises. In a survey conducted amongst US-based multinational enterprises, information reporting on foreign controlled corporations was the second most mentioned feature of the U.S. tax code contributing to the compliance costs of foreign operations (Blumenthal and Slemrod, 1995:46). The impact of these regulations on the investment activities of multinational enterprises has also been discussed in economic literature. P. Egger and G. Wamser found, for instance (using the data-set provided by the German Central Bank), that CFC rules in Germany are associated with an increase of the overall cost of capital for MNEs which leads to a significant decrease in their foreign real investment. The authors provide evidence that subsidiaries covered by CFC rules use significantly fewer fixed assets, so these regulations by policy makers may have an undesired impact on active investment (2011:18).

3 CONTROLLED FOREIGN COMPANY TAXATION: ANALYSIS OF LEGISLATION IN THE USA AND SELECTED EUROPEAN UNION MEMBER STATES

The institution of the controlled foreign company is very common. So far it has not been introduced in the EU by Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Ireland, Luxembourg, Poland, Romania and Slovakia (Deloitt, 2014:71). Some countries use not only CFC but also other instruments to counteract tax avoidance, and these also make it possible to impose taxes on some categories of income earned by companies related to domestic entities but located in tax havens. Amongst these countries there are: Austria, Latvia, Malta, the Netherlands and Slovenia.

In the countries which implemented the discussed instruments there are significant differences with respect to basic elements of its construction, including: the definition of control, the category of the income subject to taxation or tax exemptions. In most countries the income of a controlled foreign company is added only to the income of legal persons. In some, for example, Germany, Sweden or the USA, the income of CFCs is ascribed also to appropriate individuals and is taxed in their countries of residence.

In economic literature there are two CFC concepts,which take into account (Lang et al., 2004:137):

1) the category of income of the company, and
2) the scope of its activity.

In the case of the first, called the transactional approach, only passive sources of income are subject to taxation (for example dividends, interest on loans or license fees). In the other – the entity approach – the institution of the CFC refers to specific entities, usually pursuing economic activities of a nature as defined by the tax law.

In most countries the institution of the controlled foreign company refers to all entities and the tax is imposed on income regardless of its source. The exceptions include Hungary, Spain, Germany and the USA. In these countries tax is imposed on specified categories of a CFC's income.

A number of countries have developed lists of tax havens or countries using harmful tax competition and taxed the income of controlled foreign companies if they are residents in the listed jurisdictions – this approach is called the locational approach (Miller and Oats, 2009:277). As part of this concept, in some countries the institution of a controlled foreign company refers only to the shareholders of companies located in jurisdictions offering preferential tax conditions, which is called the designated-jurisdiction approach (Russo, 2007:213). In other countries the CFC rules apply only if the tax rate in a company's country of residence, imposed on the income of this company, is lower than the tax rate of an analogous company in the country of residence of the company's shareholder (effective-tax-rate approach). Most of the countries which implemented the institution of the controlled foreign company introduced the first of these solutions. The regulations existing in these countries usually specify what provisions of the tax law are regarded as preferential. Amongst the exceptions are Denmark, France, Spain, Germany and the USA, where the institution of CFC is applied regardless of the country of location of the controlled foreign company.

All these approaches have both advantages and disadvantages. In the transactional approach a list of categories of income either subject to tax or tax exempt should be included in the tax regulations. The purpose of this list is to draw the line between passive and active sources of income. In such a way the CFC rules better fulfil their purpose without discouraging foreign direct investment activities (as may be the case with the entity approach). However the major weakness of this approach is the complexity and relatively high administration costs. In addition, even with all the elaboration of passive and active income definitions that may be found in some countries using the transactional approach (e.g. USA), it is unlikely that the legislator will be able to include all the forms of income capable of being devised and used for the purpose of tax avoidance by tax planners. For this reason it is often necessary to provide enforcement authorities in these countries with wide discretionary powers that involve many subjective judgements (Prebble, 1987:24). In order to avoid double taxation of income by the entity approach the regulations should provide for a clause enabling the exclusion of the company from taxation if it carries out a genuine business activity. That may also lead to legal complexity and increase the number of court cases.

Table 4

The dates of the introduction of CFC regulations in selected countries

Country	Date of entry
United States	1962
Canada, Germany	1972
Japan	1978
France	1980
United Kingdom	1984
New Zealand	1988
Australia, Norway, Sweden	1990
Denmark, Finland, Indonesia, Portugal, Spain	1995
Hungary, Mexico, South Africa, South Korea	1997
Argentina	1999
Estonia, Italy, Israel, Lithuania	2000

Source: Arnold and McIntyre (2002:89).

The locational approach, with a list of counties included or excluded from taxation, reduces both the administrative burden and the compliance costs of multinational enterprises. Two problems, however, are likely to arise in connection to this approach. First it may contribute to the loss of revenue in respect of some passive income obtained by companies located in jurisdictions not included on a black list (or included on a white list). Secondly, if the company is grounded for tax-avoidance reasons it may be difficult to determine its residency. Such a company may have its place of incorporation, location of head office, place for conducting business and meeting place for board directors in different jurisdictions.

The institution of the controlled foreign corporation was first introduced by the United States (table 4). The relevant regulations are included in Subpart F (sections 951-965) of the *Internal Revenue Code* (online). A foreign company is regarded as controlled by American shareholders if the sum of their direct or indirect shares in the company's capital or voting rights, on any day of a fiscal year, exceeds 50%. When the sum of these shares is calculated, only those US shareholders whose direct or indirect share in the voting rights of the corporation is not less than 10% are taken into account. At the same time the share must exceed quoted thresholds for the period of a minimum of 30 days in a fiscal year. Statutorily specified categories of a CFC's income are added to the domestic income of the taxpayer and then taxed. These categories include:

- statutorily defined insurance income,
- foreign base company income, which covers: foreign personal holding company income (inter alia: interests, dividends, rents, royalties, gains and notional principal contract income); foreign base company sales income; foreign based company services income; foreign based company oil related income,

– income from countries subject to international boycotts,
– illegal bribes, kickbacks, or other payments unlawful under the *Foreign Corrupt Practices Act* (online),
– income from countries with which the U.S. has severed diplomatic relations.

The law envisages a number of exemptions from taxation. These concern, for example, foreign based company income or insurance income, if its amount is lower than 5% of the total income or than 1 million USD (*de minimis* rule). At the same time if this sum constitutes more than 70% of a CFC's income, the part of the total income of the corporation attributable to the shareholder must be declared and taxed in the USA (full-inclusion rule). Moreover the CFC income is exempt from taxation in the USA if the effective tax rate imposed in the country of residence of the CFC is more than 90% of the maximum corporate income tax rate in the USA. Some categories of income of a foreign personal holding company are also exempt from taxation.

Since CFC provisions are designed to prevent profit shifting to tax havens, they attract the attention of the European Union authorities from the viewpoint of the principles of the fundamental freedoms, especially the freedom of establishment and the freedom of movement of capital. In this respect the question arises as to whether CFC regulations infringe these principles. As a result the national CFC rules of the European Union member states may be influenced by rulings of the European Court of Justice.

In the so-called *Cadbury-Schweppes* decision, the European Court of Justice tried to impose restrictions on CFC rules for affiliates that operate within the EU/EEA and belong to multinationals that are headquartered in an EU/EEA country. The case concerned a UK parent corporation that set up two finance subsidiaries in Ireland. The Irish subsidiaries had no offices, phones or employees so the national tax administration assumed that they were set up to take advantage of the Irish low-tax regime. As a result the UK tax authorities sought to apply CFC rules on the income obtained by these subsidiaries (Harris and Oliver, 2010:309).

After the national tax authorities demanded corporation tax, *Cadbury-Schweppes* appealed. Finally the relevant UK court referred the case to the ECJ, which concluded that taking advantage of a low tax rate in a member state cannot in itself be defined as an abuse of Community law. It also held that the UK's CFC regulations were indeed in violation of the principles of free establishment within the community unless the legislation is limited to apply only to wholly artificial arrangements designed to avoid national taxation. Consequently the ECJ noted that even if the intention to obtain the tax advantage was the reason why the controlled subsidiaries were established in Ireland, these facts alone are not sufficient to conclude that there was a wholly artificial arrangement intended solely to avoid UK tax. Summarizing, the decision of the ECJ is an attempt to draw a line between tax avoidance and tax planning and confirms that certain types of tax planning are acceptable in an internal market concept (O'Shea, 2007:20-21).

Table 5
Main characteristics of CFC regimes in France, Germany, UK and USA

Country	Approaches applied	Categories of shareholders subject to taxation	Categories of income subject to taxation	Definition of control	Nature of exemptions
France	Entity approach; effective tax rate approach	Legal entities	All types of CFCs' income	More than 50% of direct or indirect shares in the capital, voting rights or financial rights	Exemption for capital gains; exemption if shareholder proves that the CFC is not an artificial arrangement to circumvent French tax legislation
Germany	Transactional approach; effective tax rate approach	Individuals and corporations	Only passive income; law stipulates which categories of income are not subject to taxation	More than 50% of direct or indirect shares in the capital or voting rights; the threshold is reduced to 1% if CFC is engaged in the business of certain financial transactions	Exemption for EU-resident companies; exemption for real estate investment trusts
United Kingdom	Entity approach; effective tax rate approach	Companies	Only certain categories of income defined by gateway test	Direct or indirect share in CFC's capital or voting rights in the amount sufficient to manage the company's issues	Exempt period exemption; excluded territories exemption; low profits and low profit margin exemption; low level of tax exemption; finance company exemption
United States	Transactional approach; effective tax rate approach	Individuals and corporations	Only certain categories of income defined by tax law	The sum of the direct or indirect share of all shareholders in the corporation's capital or voting rights exceeds 50%; each American shareholder owning directly or indirectly at least 10% of the voting stock	*De minimis* exemption; low level of tax exemption; exemption for certain categories of income of a foreign personal holding company

Source: Own compilation based on Deloitt (2014:20-23, 61-65).

In reaching this decision the ECJ examined the UK motive test and expressed doubt as to its adequacy. The decision of ECJ gave an impetus to legislative amendments to CFC rules in the United Kingdom. According to the provisions currently in force the CFC institution is applied when companies resident in this country control a foreign company, i.e. own direct or indirect shares in its capital or voting rights of an amount sufficient to manage the company's affairs. The definition of control also includes 40% ownership if no other non-UK resident has a 55% interest in the corporation (Harris, 2013:119). Since 1st January 2013 the regulations for CFCs are contained in Part 9A, *Taxation (International and Other Provisions) Act* 2010 (*Controlled Foreign Companies,* online). The changes implemented concern especially the scope of the taxable income of a CFC; it is determined with the use of the so-called "gateway test", which enables the determination as to if, and in relation to which income of a given CFC, profit shifting to another country for tax reasons has taken place. This test serves to exclude a proportion of entities from the scope of the CFC rules before taking into account the other exemptions. It is considered to be more precise and more objective than the motive test which it replaced.

The gateway test consists of two elements: "pre-gateway test" and "main gateway test". The first test enables companies to answer the question whether or not the specific parts of main gateway test require consideration. The second consists of five parts related to the following income categories:

- income attributable to UK significant people functions,
- non-trading finance income,
- trading finance income,
- income from captive insurance business,
- income that is within the scope of the CFC charge because the CFC is the subject of a solo consolidation waiver or because there are arrangements that have a broadly equivalent regulatory effect.

Taxation is imposed only on income falling into one of these categories. For each category of income defined by the law there is a qualitative set of questions to determine whether it passes through the gateway. For example non-trading finance income which consists of non-trading income taxable under the loan relationship rules (e.g. derivative contract income or interest), dividends or other distributions that are not tax exempt and non-trading income from relevant finance leases, may be excluded from CFC rules if it is considered incidental. If it is not incidental it will pass through the gateway and become chargeable if it is derived from: assets and risks in relation to which any relevant active decision making is carried out in UK, capital investment from the UK, specified arrangements in lieu of dividends (typically loans) with the UK or UK finance leases.

The legislator allowed for numerous exemptions (table 5). They apply mostly to controlled foreign companies located in some tax jurisdictions, if the profits of these CFCs do not exceed the amount of 500,000 GBP and the income from the activity other than commercial does not exceed the amount of 50,000 GBP and to CFCs meeting certain requirements and providing financial services within capital groups or to newly founded CFCs in the period of 12 months from the date of their classification as CFCs. Moreover, the income of a CFC is exempt from tax provided that the tax it pays in its country of residence equals at least 75% of the tax it would have to pay if it was a resident of the United Kingdom.

The German CFC rules follow closely the US regulations (Peters, 2012:6). In Germany the provisions concerning controlled foreign companies are included in Articles 7-14 of the *Foreign Tax Act (Außensteuergesetz,* online). Pursuant to the content of this Act, the implementation discussed is applicable in the following cases:

- taxpayers (natural and legal persons) subject to unlimited tax liability, having more than 50% of direct or indirect shares in the capital or voting rights of a foreign company, or
- taxpayers (natural or legal persons) subject to unlimited tax liability, having direct or indirect shares in the capital or voting rights of a foreign company in the amount of more than 1%, if the company runs a statutorily specified financial activity, including management of some assets.

The conditions are considered met also if the taxpayer is a partner in a partnership which is a partner in another partnership, if the latter owns shares in the capital or voting rights of a foreign company in the aforementioned amounts. Taxpayers owning shares in a controlled foreign corporation are obliged to pay tax on the passive income of the company, if in the company's country of residence this income is taxed by an effective tax rate lower than 25%. The *Foreign Tax Act* mentions ten categories of income which are regarded as active and these are not added to the income of a taxpayer. Amongst them are: income derived from agriculture and forestry, exploitation of natural resources, energy generation, manufacturing of goods, trading and services, banking, insurance, leasing of certain movable and immovable assets and licensing.

In France, the institution of the CFC is defined in Article 209 Bof the *General Tax Code (Code général des impôts,* online). An enterprise is regarded as a CFC if an entity subject to corporate income tax owns directly or indirectly more than 50% shares in the capital or voting rights of this enterprise. An anti-abuse provision reduces this threshold to 5% for each direct or indirect French shareholder when more than 50% of the shares in the foreign entity are owned by other French entities or entities that are considered nominees of the French shareholder (Deloitt, 2014:20). The income of a CFC is added to other income of this entity, if the effective income tax rate in the CFC's country of residence is at least 50% lower than the effective income tax rate in France. Moreover, these regulations are only applied if the income of a foreign company is not earned from industrial or commercial activity run in the jurisdiction where it is located. There are, however, exceptions to this rule. This exemption does not apply to companies which run an industrial or commercial activity in the jurisdiction where they are located, but –

at the same time – earn more than 20% of their income from financial activity or from the trading of intangible assets. If a company presents the tax authorities with evidence that it is not located on a foreign territory only for tax reasons its income may be exempt from tax in France.

Despite their weaknesses the US rules seem to be the most effective model of CFC legislation. They impose taxation on income derived from activities that are prone to profit shifting practices and are less likely to discourage active forms of investment than the regulations based on the entity approach. Moreover they provide for a wide range of persons subject to taxation, both individuals and corporations. However precision in defining the passive income sources comes at the expense of an increased complexity that leads to the relatively high administrative costs of the US model. Amongst the European Union member states the current British CFC provisions should be appreciated for the numerous exemptions and the application of a gateway test which will probably allow better targeting of artificial arrangements aimed at tax avoidance than the motive test.

Taking into account all the pros and cons of the applied provisions it has to be said that the best solution appears to be a hybrid of the transactional approach and the locational approach accompanied by a jurisdictional list of countries designed in the form of administrative documents. Such an approach will not be over-complex or cause extensive compliance costs and the jurisdictional list itself will be capable of easy amendment.

4 TAXATION OF CONTROLLED FOREIGN COMPANIES IN POLAND: OVERVIEW OF THE BILL'S PROVISIONS

Pursuant to the provisions of the bill sent to the lower chamber of the Polish Parliament (*Sejm*) on April 14th, 2014, a controlled foreign company is defined as a company with the seat or the management board either (*Projekt ustawy o zmianie ustawy,* 2014):

- on a territory or in a country applying harmful tax competition, or
- on the territory of any foreign country if Poland (or the European Union) has no international agreement with it (in particular, a double taxation agreement) on the basis of which it is possible to obtain tax information from this country.

A CFC is also any foreign company in which the following conditions are jointly met:

- for the period of minimum 30 days continually, the taxpayer owns, directly or indirectly, at least 25% of shares in the capital or 25% of the voting rights in the control or decision-making organs, or 25% of the shares involving the right to participate in profits,
- at least 50% of the company's revenue earned in a fiscal year comes from passive sources of revenue, i.e. dividends and other income from shares in

profits, from the sale of shares (stock), debts, interests and proceeds from loans, deposits and guarantees, as well as from copyrights, industrial property rights, including the sale of these rights and the execution of rights from financial instruments,
– at least one part of the company's passive income is subject to taxation in the country where the company has its seat or management board with the income tax rate lower than minimum 25% of the rate existing in Poland, or if the company is exempt or excluded from income tax in this country, unless the company's income is subject to exemption from tax in the country where the company has its seat or management board under the provisions of the *Directive on the Common Taxation System Applicable to Parent Companies and Subsidiaries of Different Member States*.

The legislator assumed that the taxable income is the income earned by a company proportionally attributable to the period in which the company has had CFC status, in such a share as corresponds with the shares owned by its Polish shareholder (the taxpayer) and involving the right to participate in profits, after deducting the dividend obtained by the taxpayer and the amounts earned from the sale of shares in the CFC. If the dividends obtained or the amounts earned from the sale of the shares are not deducted in the fiscal year in which they are obtained, they should be deducted from the taxpayer's income during five consecutive fiscal years. If it is impossible to determine the share of the taxpayer in the profits of a CFC in order to add the appropriate part of the company's income to the income of the taxpayer, the share in the capital or the voting rights should be taken into account.

The income of a CFC is defined as the surplus of the sum of revenues over the costs of obtaining them (business expenses). Most of this income is determined on the last day of the CFC's fiscal year. If the CFC has no specified fiscal year or the year exceeds the period of consecutive 12 months it is assumed that the fiscal year of the CFC is the same as the fiscal year of the taxpayer. Other than in the case of domestic entities a CFC is not allowed to deduct losses incurred in previous years from its income.

Special regulations are envisaged for a situation in which the share of the taxpayer in the controlled foreign company is indirect. In that case the share of the taxpayer in the CFC is reduced by the share owned in this CFC by a subsidiary, if the subsidiary added to the tax basis the income of this CFC based on the regulations of the CFC existing in the country in which the subsidiary is subject to taxation.

The bill includes also exemptions from the taxation of CFCs if any of the following conditions are met:

- the CFC runs a genuine business activity on the territory of a country which is not an EU member or does not belong to the European Economic Area in which it is subject to taxation on the entirety of its income and the income does not exceed 10% of the revenues earned from a genuine business activity. This exemption is to be applied only if there is a legal basis for obtaining tax information from the tax authorities of the country in which the foreign controlled company is subject to taxation on the entirety of its income, or
- the CFC is subject to taxation on the entirety of its income in an EU member state or a country belonging to the European Economic Area and runs a genuine business activity in this country, or
- in a fiscal year the revenues of the CFC do not exceed an amount equalling 250,000 euros, converted into Polish currency at the average exchange rate published by the National Bank of Poland, valid on the last day of the fiscal year preceding a given fiscal year.

The legislator also proposed conditions the meeting of which may be sufficient evidence that a company conducts a genuine business activity and should be entitled to the aforementioned exemption. These conditions include in particular:

- the performance of actual activities by the company in the jurisdiction in which it is resident for tax purposes (e.g. selling goods or providing services in this jurisdiction),
- the possession of equipped premises and qualified personnel in the country of incorporation,
- the non-creation of structures which are not justified from the business perspective,
- the proportionality between the scope of the company's activity and the premises, the premises and the personnel,
- the conclusion of agreements which correspond to economic reality are economically justified and not obviously in conflict with the general business interests of the company,
- the independent performance by the company of basic business functions using its own resources, including resident managers.

The income of a CFC is added to the income of the taxpayer and is taxed at an appropriate corporate or personal income tax rate. In the case of the first, the appropriate rate is 19%. In the case of personal income tax, current tax rates equal 18% and 32%.

In the light of the scheduled legal changes earning income from shares in controlled foreign companies will involve a number of record-keeping requirements. Taxpayers are obliged to keep a register of companies in which they own shares. The register is to include information enabling the determination of the income of a company. At the request of the tax authorities the taxpayer must provide them with insight into the register within 7 days of the date of receipt of the request.

Should the taxpayer fail to make the register available to the tax authorities, the authorities will independently estimate the amount of the company's income. By the end of the ninth month of the year falling after the CFC's fiscal year, taxpayers owning shares in the company are required to submit evidence of the amount of the company's income. By this time they should also pay the amount of the tax due.

5 CONCLUSION

The implementation of a CFC regime requires precise determination of the circumstances in which it is applied. As it is used in many countries the Polish legislator does not have to design national legislation following only the American example. However, it must be emphasized that it is the American institution of controlled foreign corporation that has the longest history and was the prototype on which other countries modelled and implemented their CFC regulations, including many countries of the European Union. The Polish legislator suggested the combination of the two existing approaches. The CFC regulations are to apply not only to shareholders of companies located in countries which use harmful tax competition, the list of which will be attached to the proposed act, but also to shareholders of companies which have their seat or management boards in the country in which at least one of the company's passive incomes is taxed at the income tax rate significantly lower than in the country of residence of the shareholder.

The institution of controlled foreign companies proposed by the Polish legislator is in many respects different from the regulations existing in such countries as the USA, Germany, France or Great Britain. The legislator envisaged a lower threshold for the level of control of the company by a Polish shareholder than it is the case in the aforementioned countries. Moreover, unlike, for example, the situation in the USA or Germany, all the income of the corporation is to be taxed – not only the passive component. Also the scope of exemption from tax for controlled foreign companies is clearly more limited than in the case of the USA and Great Britain.

The draft of the Polish bill has been subject to public consultation, which exposed some of its weaknesses. One of them is the shifting onto the taxpayer of the burden of proof with respect to the circumstances entitling exemption from tax. Moreover it has been emphasized that the act may significantly limit the freedom of running a business activity on an international scale. The provisions obliging the taxpayer to verify the share of passive income in the total income of a CFC and the analysis of the level of the tax rate imposed on each category of passive income earned by a CFC is regarded as too complicated a solution, which will result in an excessive compliance burden being imposed on the taxpayers.

REFERENCES

1. ---, 2014. *Bezpośrednie inwestycje zagraniczne w Polsce w 2012 roku.* Warszawa: MinisterstwoGospodarki. DepartamentStrategiiiAnaliz.
2. Arnold, B. J. and McIntyre, M. J., 2002. *International Tax Primer.* The Hague: Kluwer law International.
3. Außensteuergesetz [online]. Available at: [http://www.gesetze-im-internet.de].
4. Blumenthal, M. and Slemrod, B. J., 1995. The Compliance Cost of Taxing Foreign-Source Income: Its Magnitude, Determinants, and Policy Implications. *International Tax and Public Finance,* 2(1), pp. 37-53. doi: 10.1007/BF00873106
5. Code général des impôts [online]. Available at: [http://www.legifrance.gouv.fr].
6. Controlled Foreign Companies and permanent establishments – draft guidance. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/192071/condoc_cfc_foreign_permanent_establishments_update_draftlegislation.pdf].
7. Deloitt, 2014. *Guide to Controlled Foreign Company Regimes*. London: Deloitt.
8. Egger, P. and Wamser, G., 2011. *The Impact of Controlled Foreign Company Legislation on Real Investment Abroad: A Two Dimensional-Regression Discontinuity Design.* London: Center for Economic Policy Research.
9. Foreign Corrupt Practices Act [online]. Available at: [http://www.justice.gov/criminal/fraud/fcpa/statutes/regulations.html].
10. Gajewski, D., 2009. *Corporate Income Tax.* Warszawa: Wydawnictwo C. H. Beck.
11. Gravelle, J. G., 2013. *Tax Havens: International Tax Avoidance and Evasion.* New York: Congressional Research Service.
12. Harris, P., 2013. *Corporate Tax Law: Structure, Policy and Practice.* Cambridge: Cambridge University Press. doi: 10.1017/CBO9781139519922
13. Harris, P. and Oliver, D., 2010. *International Commercial Tax.* Cambridge: Cambridge University Press. doi: 10.1017/CBO9780511777028
14. Internal Revenue Code. Available at: [http://www.irs.gov].
15. Keller, S. and Schanz D., 2013. *Measuring Tax Attractiveness across Countries. Arqus-Diskussionsbeiträge zur quantitativen Steuerlehre, No. 143*. Kiel: Leibniz-InformationszentrumWirtschaft.
16. Lang, M. [et al.], 2004. *CFC Legislation, Tax Treaty and EC Law.* The Hague: Kluwer Law International.
17. McIntyre, R. S. [et al.], 2011. *Corporate Taxpayers & Corporate tax Dodgers 2008-2010.* Washington: Institute on Taxation and Economic Policy. Citizens for Tax Justice.
18. Miller, A. and Oats, L., 2009. *Principles of International Taxation.* Exeter: Tottel Publishing.

19. NBP, 2009a. *Polskie inwestycje bezpośrednie za granicą w 2008 roku*. Warszawa: Narodowy Bank Polski. Departament Statystyki.
20. NBP, 2009b. *Zagraniczne inwestycje bezpośrednie w Polsce w 2008 roku*. Warszawa: Narodowy Bank Polski. Departament Statystyki.
21. NBP, 2010a. *Polskie inwestycje bezpośrednie za granicą w 2009 roku*. Warszawa: Narodowy Bank Polski. Departament Statystyki.
22. NBP, 2010b. *Zagraniczne inwestycje bezpośrednie w Polsce w 2009 roku*. Warszawa: Narodowy Bank Polski. Departament Statystyki.
23. NBP, 2011a. *Polskie inwestycje bezpośrednie za granicą w 2010 roku*. Warszawa: Narodowy Bank Polski. Departament Statystyki.
24. NBP, 2011b. *Zagraniczne inwestycje bezpośrednie w Polsce w 2010 roku*. Warszawa: Narodowy Bank Polski. Departament Statystyki.
25. NBP, 2012a. *Polskie inwestycje bezpośrednie za granicą w 2011 roku*. Warszawa: Narodowy Bank Polski. Departament Statystyki.
26. NBP, 2012b. *Zagraniczne inwestycje bezpośrednie w Polsce w 2011 roku*. Warszawa: Narodowy Bank Polski. Departament Statystyki.
27. NBP, 2013a. *Polskie inwestycje bezpośrednie za granicą w 2012 roku*. Warszawa: Narodowy Bank Polski. Departament Statystyki.
28. NBP, 2013b. *Zagraniczne inwestycje bezpośrednie w Polsce w 2012 roku*. Warszawa: Narodowy Bank Polski. Departament Statystyki.
29. O'Shea, T., 2007. The UK's CFC Rules and the Freedom of Establishment: Cadbury Schweppes plc and its IFSC Subsidiaries – Tax Avoidance or Mitigation. *EC Tax Review,* 1, pp. 13-33.
30. OECD, 1998. *Harmful Tax Competition: An Emerging Global Issue*. Paris: OECD.
31. OECD, 2013. *Addressing Base Erosion and Profit Shifting*. Paris: OECD.
32. Peters, A., 2012. A Comparison of the Controlled Foreign Corporation Rules in the United States, Canada and Germany. *Corporate Taxation,* 39(2), pp. 3-14.
33. Polskie inwestycje bezpośrednie w 2012 roku, 2014. Warszawa: Ministerstwo Gospodarki. Departament Strategii i Analiz.
34. Prebble, J., 1987. *The Taxation of Controlled Foreign Corporation.* Wellington: Institute of Policy Studies. Victoria University.
35. Projekt ustawy o zmianie ustawy o podatku dochodowym od osób prawnych oraz podatku dochodowym od osób fizycznych z dnia 30 kwietnia 2013 r. [online]. Available at: [http://legislacja.rcl.gov.pl/lista/2/projekt/161450].
36. Projekt ustawy o zmianie ustawy o podatku dochodowym od osób prawnych, ustawy o podatku dochodowym od osób fizycznych oraz zmianie niektórych innych ustaw z projektami aktów wykonawczych z dnia 14 kwietnia 2014 r. [online]. Available at: [http://bip.kprm.gov.pl/kpr/bip-rady-ministrow/projekty-ustaw-przeslan/296,Projekty-ustaw-przeslane-do-Sejmu-RP.html].

37. Projekt z dnia 30 kwietnia 2013 r. w sprawie zmiany ustawy o podatku dochodowym od osób prawnych oraz podatku dochodowym od osób fizycznych – ocena skutków wprowadzenia regulacji. Warszawa: Ministerstwo Finansów.
38. Proposal for a Council Directive on a Common Consolidated Corporate Tax Base (CCCTB), 2011, COM (2011) 121/4. Brussels: European Commission.
39. Russo, R., 2007. *Fundamentals of International Tax Planning.* Amsterdam: IBFD.
40. Ustawa z dnia 15 lutego 1992 r. o podatku dochodowym od osób prawnych, Dz. U. z 1992 r., Nr 21, p. 86.
41. Ustawa z dnia 23 kwietnia 1964 r., Kodeks Cywilny, Dz. U. z 2014 r., poz. 121, 827.
42. Ustawa z dnia 26 lipca 1991 r. o podatku dochodowym od osób fizycznych, Dz. U. z 1991 r., Nr 80, p. 350.

Emerging from the Shadow: A Comparative Qualitative Exploration of Private Tutoring in Eurasia

BORIS JOKIĆ (Ed.)
Network of Education Policy Centers, Zagreb, 2013, pp. 330

Book review by PREDRAG BEJAKOVIĆ*
doi: 10.3326/fintp.38.4.5

* Received: May 30, 2014
Accepted: June 1, 2014

Predrag BEJAKOVIĆ, PhD
Institute of Public Finance, Smičiklasova 21, 10000 Zagreb, Croatia
e-mail: predrag.bejakovic@ijf.hr

Many things in education are either unknown or frequently neglected. Why do some countries spend almost the same amount of money per student and obtain significantly different results? What is the implication of the size of class for educational results? Is it more important to have an adequate curriculum or highly motivated teachers? How can students be motivated to learn so that one day they will be part of a highly competitive and adequately educated labour force? Of the many questions that have no appropriate answers, one at least has been nicely analysed and explained: What is the role of private tutoring in five Eurasian countries: Azerbaijan, Bosnia and Herzegovina, Croatia, Estonia and Georgia. These states have more differences and relatively few similarities: they all left the socialism and were parts of bigger states, and now they face many (post)transitional problems, they mostly have weak governments and are often captured in economic, politic and organisational disorientation and bad organisation that are reflected in their educational systems. The answer to the question concerning the importance, functioning, causes and consequences of private tutoring can be found in *Emerging from the Shadow: A Comparative Qualitative Exploration of Private Tutoring in Eurasia*[1], published by Network of Education Policy Centers from Zagreb. The book is prepared by a group of authors from the five mentioned countries: Boris Jokić (also the editor), Tamar Bregvadze, Elmina Kazimzade, Laura Kirss, Zrinka Ristić Dedić and Andrea Soldo.

In many countries, the decision to use private tutoring (PT) services has become almost a norm, rather than an exception. Thus, PT can be considered a world megatrend, quite accepted by all stakeholders in education. By definition PT is *fee-based instruction in academic school subjects that is complementary to the instruction mainstream schools provide free of charge*. The goal of the book is to explore educational stakeholders' perspectives regarding the PT phenomenon in the five mentioned countries; to compare educational social perspectives across the researched backgrounds and to develop, in partnership with participants, policy options for addressing the PT phenomenon. The basis of the book is a comparative qualitative research effort conducted over the course of 18 months in 2009 and 2010 in the mentioned countries where individual semi-structured interviews and focus groups discussions were conducted with selected educational stakeholders. The authors discussed PT factors with many persons from governmental, political, professional, parental, educational, PT provision, teaching and academic fields among others, investigating their personal experiences with and understanding of the PT phenomenon; factors influencing the decisions to use or provide PT services; effects of PT on the individual, educational system, society and economy. One of the crucial recurrent issues is whether PT is a response to the shortcomings of the regular school system or a normal additional service for the particularly talented or alternately for students that have problems with regular

[1] The book is available at: [http://www.edupolicy.net/index.php?option=com_content&view=article&id=183The%20&Itemid=104].

curriculum. What is the link between PT and the educational aspirations of students and their parents?

After introductory notes, the next of the ten chapters provides the conceptual framework developed in order to explore the educational stakeholders' perspectives on PT. Placed at the core of the conceptual framework are the conditions influencing the decision to use (or not to use) PT services. According to the literature and survey results, the decision is almost always made by parents and children together, but there are cases where the decision is made only by the pupil, mostly as a part of the preparation for entrance exams for tertiary education. Here an important role is played by pupils' and parents' perspectives on the formal system of education and students'educational aspirations, motivations and working habits. Perspectives include attitudes and beliefs that comprise information about the pupil's educational achievement, pupil and parental views on curricular content and its implementation, views of teacher delivery or the overall teaching and learning process, perceived (non)adequacy of educational and psychological preparation for high stake assessment, beliefs regarding the quality of education provided in the formal education system, behaviour of other pupils or any other element incorporated within the complex system of formal education. The educational aspirations of pupils and parents embody the ambitions and goals they hold regarding immediate and future educational experiences and outcomes. Educational aspirations are often related to educational achievements, but they might also be a link to the curricular content provided within the formal system, pupils' development or various other educational and personal factors.

In the third chapter, the methodological decisions and design behind the present research project are explored and described, positioning the research design in the fields of both PT and comparative education research. The chapter begins with an overview of the research on which the present volume is founded. This is followed by the methodological considerations guiding the research. In order to investigate complex issues like PT appropriately, a variety of methods are needed, in addition to methodological precision. This methodological precision is important due to the qualitative nature of the research and particularly its comparative design. The crucial part of the chapter is an analysis of the different stages and decisions in the research process, starting from the development of the general sampling design, continuing through a detailed description of participant selection and the construction of data collection instruments and procedures, and finally to a consideration of the decisions made in the process of data analyses. The chapter finishes with a discussion on the verification procedures aimed at ensuring quality in the present research. As the aim of the research was to gain insight into the individual perspectives of educational stakeholders regarding the PT phenomenon, verifiability of the research findings was provided by ensuring and examining trustworthiness, transferability, credibility and dependability as qualitative equivalents for the appropriate indicators of reliability and validity in quantitative data.

School reforms, which include the introduction of standardised curricula together with increased assessment procedures, might affect parents' anxiety about their children's educational advancement and therefore results in an increased likelihood that PT services will be used. Furthermore, one could expect that that PT might become more necessary in systems that are teacher-centred rather than pupil-centred and/or are intolerant to slow learners. As curricular and other factors of formal education systems might also contribute to the emergence of the PT phenomenon, in chapter four characteristics of the formal education systems in the selected countries and the decision concerning the use of private tutoring service are described. Various included stakeholders deemed that curriculums in selected countries are overloaded, dense, extensive, prescriptive, overly sophisticated and even irrelevant and boring. Not all the selected countries have modern curriculums that should be challenging, enjoyable and applicable to pupils, be of sufficient breadth and depth according to pupils' abilities and characteristics, be coherent and progress in a logical manner, and include elements of personalisation and choice. There are many adverse factors that impede effective teaching practices, among others the depth and width of a curriculum coupled with a maladjusted number of teaching hours determining the pace and rhythm of classwork and an over-reliance on curriculum and textbooks.

The vital role of teachers in the quality of education and learning processes is analysed in chapter 5. In all five countries, due to the negative selection in educational faculties, there are many persons who are not suitable to be teachers at all. The quality and effectiveness of teaching practices is a function of teacher competence, but it is also influenced by different elements related to the environments in which teachers work, including the amount and quality of available instructional resources, traits of pupils, physical and interpersonal work conditions, staffing, and support from administrators and parents acknowledged. As the authors rightly state these issues become even more important in circumstances when the demands placed upon schools and teachers are becoming increasingly great and complex. It seems quite normal to expect that the discrepancy between familial perspectives on the formal education system and educational aspirations would increase the likelihood of deciding to use PT services. In all participating countries, one of the most frequently reported elements in regular education emerging from the Survey was the inadequate training of many teachers in the fields of psychology, pedagogy, didactics and teaching methods. The stakeholders interviewed believe that teachers do not receive quality education. They usually acquire knowledge in specific areas of expertise, but they are not adequately trained in didactics and teaching methods. Furthermore, many future teachers have serious lack of practical experience, have not experienced realistic classroom situations and have not familiarised themselves with the possible challenges and problems facing them in the everyday work of a teacher. On the other hand, the number of students in the classroom is often too big, so students and teachers state that the PT cures many problems of regular education. It enables students to have better educational outputs, while teachers are able to provide better services and fulfil some of their ideas and plans for education that they cannot employ in regular schools. In this way, teachers in B&H, Croatia and Estonia – where the salaries in education are higher than or around the national average – often feel a high level of satisfaction from participating in the provision of PT. On the other side, many teachers in Azerbaijan and Georgia – where salaries in education are significantly lower than the national average – are forced to provide PT and would be very happy to desist if the salaries were higher.

While educational systems and programmes are targeted to an imagined *average pupil* or *average class*, in any real given situation, there are 30 and more students in the class with different knowledge levels, motivations, work habits and attitudes towards education. Accordingly, regular education is adjusted and oriented to nobody, is often conservative, boring and outdated, while simultaneously there is not enough care for the individual. The authors in chapter 6 discuss the perspectives of educational stakeholders regarding the relationship between pupils' motivation for learning in school, work habits and aspirations for educational success and decisions concerning a resort to PT. Also the views of educational stakeholders regarding the relationship between individual personality characteristics and the decision to use PT were analysed. Included here are perspectives on the impact of other concepts, such as self-esteem and academic self-confidence as well as the relationship between the variety of individual learning styles and cognitive abilities and the decision whether or not to use PT services. Interviewees from all groups underline the importance of low levels of pupil motivation for learning in school as the crucial factor contributing to the use of PT services. Low motivation leads to lower educational achievement and the inability to fulfil even minimal educational aspirations. Thus, parents and pupils decide to use PT services because this is the only way that the children can pass exams, remain in the education system or advance to the next educational level. Pupils themselves state that they often for many reasons do not really listen during the regular education and are forced to use PT. Very rarely do parents openly admit that their child is lazy and that the low level of educational achievements is his or her fault. Parents mostly blame the formal system for its failure to motivate pupils for learning and for the development of good work habits. On the other hand, one cannot deny the failure of the regular education system to instil positive motivational patterns, its apparent destruction of motivation, ambition and educational aspirations through unrealistic expectations, which directly contribute to the resort to PT services. Finally, if remedial classes are organised in a school, they are primarily seen as a means to meet workload requirements because teachers lack some teaching hours; the classes, accordingly, are not adjusted to the needs of individual pupils.

Chapter 7 analyses the crucial role of parents in making the decision to seek PT services and examines the sentiment of parents towards the formal educational system and its services. Parents influence their child's work habits and learning

FINANCIAL THEORY AND PRACTICE
38 (4) 489-496 (2014)

strategies, as well as attitudes towards and motivation for learning in school. It should be the responsibility of parents, with help from teachers and schools, to guide their children's education path. Parents exercise the most influence on the educational aspirations for and of their children, transmitting and developing ideas about the value and importance of education and often monitoring and determining these aspirations. This situation derives from a basic understanding that education is necessary for children's success in life and future work, and parents want to aid their children in achieving this success. Parents are those who have to be capable of financing PT services if they deem that such services are necessary. This study describes PT as one of the means through which parents exercise their personal responsibility for their children's educational achievements. Nearly all stakeholders suggested that parents were inclined to make a decision concerning PT services as a result of the inability of the formal education system to fulfil the educational aspirations and expectations held for their children. The decision to use PT is regarded as an intervention the goal of which is to control and influence pupils' educational outcomes as well as the teaching and learning processes within the formal education system. In these circumstances, PT serves as an effective way to both influence the educational opportunities of an individual pupil and to deal with some of the observed deficiencies of the formal system. The results of the study demonstrate that parental dissatisfaction with formal systems of education is a relevant influence on the decision to seek PT services. Furthermore, the authors try to find out the reasons for parents' decision to use PT as a means to address this dissatisfaction with the formal system of education. Moreover they examine why parents are not more active in helping their children and why they believe that PT is a reasonable alternative to other options for supporting the educational needs of children. Briefly, parents are often tired with the many reforms and changes within the formal education system and due to lack of time, knowledge and/or patience as well as for the sake of their own convenience are willing to pay for PT services so that they do not have any direct obligation to help their children. Some of them admit that they are hypocritical in blaming the teachers and schools, but do not want to confess own unrealistic parental expectations and aspirations.

The influences of various elements from the wider societal sphere on the decision to resort to private tutoring services are examined in the chapter 8. Such socially-derived factors influence the perspectives of both pupils and parents regarding the formal system of education and also have an impact on their educational aspirations. Empirical evidence from different countries has confirmed that the levels of competitiveness within a society and within an educational system, the value placed on education and the importance of educational achievements for future life and social mobility, contribute to a decision as to whether to use PT services. In many former socialist countries people view education as a way to escape the hardships of the deteriorating economies of the transitional period and see PT as a long-term investment intended to ensure that their children obtain tertiary education and have better opportunities on the labour market. There is also a changed attitude towards PT in these countries: while in previous system PT was perceived as a stigmatising educational endeavour intended mostly for less able pupils that have difficulties in fulfilling even the minimal educational requirements, now it has become a widely socially accepted practice and a necessity that is required for better educational output. Many interviewed persons expressed the view of PT as a "normal" or even "necessary" educational service because the level of teaching at school is not adequate, so parents have no choice.

An analysis of the relation between PT services and equity in education is provided in chapter 9. At first glance, one could believe that the PT undermines equity, but it seems that members from almost all social strata can pay for some kind of PT, although of course the quantity and particular quality of the received service greatly differ. In this way PT might seriously endanger the principles of equity in education and, in extreme circumstances, could also be a threat to overall social stability. Probably there is no problem with accessibility and affordability of PT because nowadays a very large proportion of students are employing PT services, but the participants from more privileged socio-economic backgrounds use more and higher quality instruction. In the survey, there were two different approaches to the PT equity issue. Participants that had direct and closer contact with pupils and teaching and learning processes, like teachers, were more aware of the inability of poor families to afford PT services and they believed that private tutoring was some kind of a privilege. On the other hand, interviewed persons who did not have daily or direct contact with actual teaching or PT practices showed a tendency to minimise the effect of differing socio-economic backgrounds on PT use. People believe that the best tutors are those teachers and professors who are directly involved in preparing the examinations for external assessment, and they are highly valued and sought, which of course opens up an ethically controversial issue. In some cases, interviewed persons were not always ready and willing to speak openly about equity issues related to PT and, in that respect, ignored the problem of the inequality inherent in the PT phenomenon.

In the short chapter 10, the editor, Boris Jokić, provides a conclusion. In all the countries included, the analyses revealed the mostly non-existent or largely ineffective remedial support strategies in the formal systems of education for development of pupils' motivation and work habits. In such cases, it seems rational that private tutor services will be almost the only possibility for receiving adequate support for difficulties in learning. The Project has shown that the professional competences of teachers and teaching practices are also related to the parental and pupil decision concerning PT use. Stakeholders from all countries believe that pre-service and in-service teacher training was not adequate for preparing teachers for the challenges they face in everyday practice. Due to these shortcomings, teaching practices may be perceived as inappropriate and inefficient and, consequently, negatively influence parental and pupil perspectives on the formal system of education. Most of the persons interviewed are not very positive about the ability of formal educational systems to accommodate the diversity of pupils' individual characteristics and needs. Particularly emphasised is the existing discrepancy between the inherent diversity of individual pupil characteristics and needs and the "one size fits all" approach of the formal educational system.

This excellent book provides the research findings and an analytical discussion of the various elements related to the causes and consequences of private tutoring in the five observed countries. In addition to it having extensive relevant theoretical and empirical readings incorporated into each analytical chapter with the goal of establishing an enhanced comparative basis for the topics under observation, it is very rich in statements from various stakeholders regarding their attitude towards PT. The concluding chapter contains an overview of the findings and offers a discussion of them that is really valuable for future research into the PT phenomenon and the development of possible policy options. One should only congratulate the editor and his team for a really valuable product, while looking forward to their future researches and books.

List of reviewers in the period 1999-2014

Prepared by MARTINA FABRIS*

doi: 10.3326/fintp.38.4.6

* Martina FABRIS, PhD
Institute of Public Finance, Smičiklasova 21, 10000 Zagreb, Croatia
e-mail: martina.fabris@ijf.hr

FINANCIAL THEORY AND PRACTICE
38 (4) 497-506 (2014)

Akinlo, A. E., PhD, Obafemi Awolowo University, Ile-Ife, Nigeria

Alfirević, Nikša, PhD, Faculty of Economics, Split, Croatia

Andrijašević, Sanja, PhD, Zagreb, Croatia

Anušić, Zoran, MSc, World Bank, Zagreb, Croatia

Apergis, Nicholas, PhD, University of Piraeus, Department of Banking and Finance, Piraeus, Greece

Arandarenko, Mihail, PhD, University of Belgrade, Faculty of Economics, Belgrade, Serbia

Arbutina, Hrvoje, PhD, Faculty of Law, Zagreb, Croatia

Babić, Ante, PhD, Zagreb School of Economics and Management, Zagreb, Croatia

Babić, Zdenko, PhD, Institute of Economics, Zagreb, Croatia

Bađun, Marijana, PhD, Institute of Public Finance, Zagreb, Croatia

Bajo, Anto, PhD, Institute of Public Finance, Zagreb, Croatia

Baker, Philip, PhD, University of London, Institute of Advanced Legal Studies, London, UK

Bakić, Damir, PhD, Faculty of Science – Mathematics, Zagreb, Croatia

Barac, Zoran, MSc, Zagreb School of Economics and Management, Zagreb, Croatia

Barbić, Tajana, PhD, Institute of Economics, Zagreb, Croatia

Baretić, Marko, PhD, Faculty of Law, Zagreb, Croatia

Bartlett, Will, PhD, London School of Economics and Political Science, London, UK

Basrak, Bojan, PhD, Faculty of Science – Mathematics, Zagreb, Croatia

Begović, Boris, PhD, Center for Liberal-Democratic Studies, Belgrade, Serbia

Bejaković, Predrag, PhD, Institute of Public Finance, Zagreb, Croatia

Benković, Andreja, Dipl. oec., University of Hohenheim, Department of Economics, Stuttgart, Germany

Bezinović, Petar, PhD, Institute for Social Research, Zagreb, Croatia

Billmeier, Andreas, PhD, International Monetary Fund, Washington D.C., USA

Blažić, Helena, PhD, Faculty of Economics, Rijeka, Croatia

Bokan, Nikola, PhD, Croatian National Bank, Zagreb, Croatia

Bönker, Frank, PhD, University of Cooperative Education Leipzig, Leipzig, Germany

Boromisa, Ana-Maria, PhD, Institute for Development and International Relations, Zagreb, Croatia

Botrić, Valerija, PhD, Institute of Economics, Zagreb, Croatia

Bratić, Vjekoslav, PhD, Institute of Public Finance, Zagreb, Croatia

Bronić, Mihaela, PhD, Institute of Public Finance, Zagreb, Croatia

Broz, Tanja, PhD, Institute of Economics, Zagreb, Croatia

Bubaš, Zoran, PhD, Zagreb School of Economics and Management, Zagreb, Croatia

Buturac, Goran, PhD, Institute of Economics, Zagreb, Croatia

FINANCIAL THEORY AND PRACTICE
38 (4) 497-506 (2014)

Cichocki, Stanislaw, PhD, Warsaw University, Faculty of Economic Sciences, Warsaw, Poland
Colombato, Enrico, PhD, Faculty of Economics, Torino, Italy
Cota, Boris, PhD, Faculty of Economics and Business, Zagreb, Croatia
Cozmanca, Bogdan, PhD, National Bank of Romania, Bucharest, Romania
Crnković-Pozaić, Sanja, MSc, BIT Croatia Ltd., Zagreb, Croatia
Crossan, Kenny, PhD, Edinburgh Napier University, Edinburgh, Scotland
Cvitanić, Jakša, PhD, California Institute of Technology, Pasadena, USA
Cvrtila, Vlatko, PhD, VERN, Zagreb, Croatia
Ćapeta, Tamara, PhD, Faculty of Law, Zagreb, Croatia
Čečuk, Andro, PhD, Moody's Analytics Risk Management Services, London, UK
Čirović-Donev, Ita, MSc, Hypo Alpe-Adria-Bank, Zagreb, Croatia
Čok, Mitja, PhD, Faculty of Economics, Ljubljana, Slovenia
Čučković, Nevenka, PhD, Institute for Development and International Relations, Zagreb, Croatia
Dalić, Martina, PhD, Zagreb School of Economics and Management, Zagreb, Croatia
Daniels, Susane, PhD, West Virginia University, Department of Economics, Morgantown, USA
de Haas, Ralph, European Bank for Reconstruction and Development, London, UK
de Renzio, Paolo, International Budget Partnership, Washington D.C., USA
Deichmann, Joel Ian, PhD, Bentley University, Global Studies Department Waltham, Massachusetts, USA
Derado, Dražen, PhD, Faculty of Economics, Split, Croatia
Derenčinović, Davor, PhD, Faculty of Law, Zagreb, Croatia
Deuber, Gunter, MSc, Raiffeisen Bank International Vienna, Vienna, Austria
Dika, Mihajlo, PhD, Faculty of Law, Zagreb, Croatia
Dolenc, Primož, PhD, University of Primorska, Faculty of Management, Koper, Slovenia
Dolenec, Hrvoje, B.A., Zagrebačka banka UniCredit Group, Zagreb, Croatia
Dražić Lutilsky, Ivana, PhD, Faculty of Economics and Business, Zagreb, Croatia
Drüen, Klaus-Dieter, PhD, Heinrich Heine University Düsseldorf, Faculty of Law, Düsseldorf, Germany
Dumičić, Mirna, PhD, Croatian National Bank, Zagreb, Croatia
Đurđević, Zlata, PhD, Faculty of Law, Zagreb, Croatia
Égert Balázs, PhD, OECD, Paris, France
Ehtisham, Ahmad, PhD, London School of Economics and Political Science, London, UK
Erjavec, Nataša, PhD, Faculty of Economics and Business, Zagreb, Croatia
Esteller-Moré, Alejandro, PhD, University of Barcelona, Faculty of Economics and Business, Barcelona, Spain

FINANCIAL THEORY AND PRACTICE
38 (4) 497-506 (2014)

Evans, Chris, PhD, University of New South Wales, Sydney, Australia

Falconer, Stewart, PhD, Edinburgh Napier University, Business School, Edinburgh, UK

Faulend, Michael, MSc, Croatian National Bank, Zagreb, Croatia

Feige, Edgar L., PhD, University of Wisconsin-Madison, Madison, USA

Feld, Lars P., PhD, University of Heidelberg, Alfred-Weber-Institute of Economics, Heidelberg, Germany

Feldkircher, Martin, PhD, Oesterreichische Nationalbank, Vienna, Austria

Franić, Josip, MSc, Institute of Public Finance, Zagreb, Croatia

Franičević, Vojmir, PhD, Faculty of Economics and Business, Zagreb, Croatia

Fredotović, Maja, PhD, Faculty of Economics, Split, Croatia

Fruk, Mladen, MSc, McKinsey&Company Inc., Zagreb, Croatia

Funda, Josip, B.A., Croatian National Bank, Zagreb, Croatia

Galac, Tomislav, MSc, Croatian National Bank, Zagreb, Croatia

Galinec, Davor, PhD, Croatian National Bank, Zagreb, Croatia

Glas, Miroslav, PhD, Faculty of Economics, Ljubljana, Slovenia

Globan, Tomislav, PhD, Faculty of Economics and Business, Zagreb, Croatia

Goel, Rajeev K., PhD, Illinois State University, Department of Economics, Normal, Illinois, USA

Grbac, Bruno, PhD, Faculty of Economics, Rijeka, Croatia

Gruić, Branimir, MSc, Bank for International Settlements, Basel, Switzerland

Guardiancich, Igor, PhD, University of Southern Denmark, Centre for Welfare State Research, Department of Political Science and Public Management, Odense, Denmark

Haiss, Peter R., PhD, Vienna University of Economics and Business, Vienna, Austria

Hashimzade, Nigar, PhD, University of Reading, Reading, UK

Hasseldine, John, PhD, University of New Hampshire, Durham, USA

Hayoz, Nicolas, PhD, University of Fribourg, Department of Social Sciences, Fribourg, Switzerland

Heath, Ellis, PhD, West Virginia University, Department of Economics, Morgantown, USA

Heipertz, Martin, PhD, Federal Ministry of Finance, Berlin, Germany

Hernaus, Tomislav, PhD, Faculty of Economics and Business, Zagreb, Croatia

Hočevar, Marko, PhD, Faculty of Economics, Ljubljana, Slovenia

Hodžić, Sabina, MSc, Faculty of Tourism and Hospitality Management, Opatija, Croatia

Hoerdahl, Peter, PhD, Bank for International Settlements, Basel, Switzerland

Holzner, Mario, PhD, The Vienna Institute for International Economic Studies, Vienna, Austria

Hornok, Cecilia, PhD, Centre for Economic and Regional Studies of the Hungarian Academy of Sciences, Budapest, Hungary

Hug, Simon, PhD, University of Geneva, Geneva, Switzerland

Huljak, Ivan, B.A., Croatian National Bank, Zagreb, Croatia

Inotai, András, PhD, Institute for World Economics of the Hungarian Academy of Sciences, Budapest, Hungary

Ivanov, Marijana, PhD, Faculty of Economics and Business, Zagreb, Croatia

Jafarov, Etibar, PhD, International Monetary Fund, Washington D.C., USA

Jager, Matjaž, PhD, Faculty of Law, Ljubljana, Slovenia

Jakovljević, Tatjana, univ. spec., Croatian Competition Agency, Zagreb, Croatia

Jaworski, Piotr, PhD, Edinburgh Napier University, School of Accounting, Economics and Statistics, Edinburgh, UK

Jazbec, Boštijan, PhD, Faculty of Economics, Ljubljana, Slovenia

Jeanne, Olivier Dominique, PhD, Peterson Institute for International Economics, Washington D.C., USA / Johns Hopkins University, Baltimore, Maryland, USA

Jelavić, Vladimir, PhD, Ekonerg, Zagreb, Croatia

Jelčić, Barbara, PhD, Faculty of Economics and Business, Zagreb, Croatia

Jelčić, Božidar, PhD, Faculty of Law, Zagreb, Croatia

Jerković, Mirjana, PhD, Institute of Public Finance, Zagreb, Croatia

Jolić, Ivana, MSc, Croatian National Bank, Zagreb, Croatia

Jovanović, Tatjana, MSc, Faculty of Administration, Ljubljana, Slovenia

Jović, Ivana, Privredna banka Zagreb, Zagreb, Croatia

Jovičić, Goran, MSc, Croatian National Bank, Zagreb, Croatia

Jozić, Mijo, B.A., Croatian Financial Services Supervisory Agency, Zagreb, Croatia

Jurlina Alibegović, Dubravka, PhD, Institute of Economics, Zagreb, Croatia

Kaliterna Lipovčan, Ljiljana, PhD, Institute of Social Sciences "Ivo Pilar", Zagreb, Croatia

Karlinsky, Stewart, prof. emeritus, San Jose State University, San Jose, California, USA

Kersan Škabić, Ines, PhD, Juraj Dobrila University of Pula, Department of Economics and Tourism, Pula, Croatia

Kesner-Škreb, Marina, MSc, Institute of Public Finance, Zagreb, Croatia

Klepac, Goran, PhD, Raiffeisen Bank, Zagreb, Croatia

Klun, Maja, PhD, Faculty of Administration, Ljubljana, Slovenia

Kocenda, Evzen, PhD, Center for Economic Research & Graduate Education – Economics Institute (CERGE-EI), Prague, Czech Republic

Kordej-De Villa, Željka, PhD, Institute of Economics, Zagreb, Croatia

Kostova, Miroslava, PhD, University of Alicante, Department of Economics, Alicante, Spain

Kraft, Evan, PhD, American University, Washington D.C., USA

Kregar, Josip, PhD, Faculty of Law, Zagreb, Croatia

Krkoska, Libor, PhD, European Bank for Research and Development, London, UK

Kružić, Dejan, PhD, Faculty of Economics, Split, Croatia

Krznar, Ivo, PhD, International Monetary Fund, Washington D.C., USA

Kuliš, Danijela, univ. spec. oec., Institute of Public Finance, Zagreb, Croatia

Kunovac, Davor, Croatian National Bank, Zagreb, Croatia
Kurnoga, Nataša, PhD, Faculty of Economics and Business, Zagreb, Croatia
Kuzmanović, Branka, MSc, Hauska & Partner Group, Zagreb, Croatia
Latković, Mladen, MSc, Raiffeisen Mandatory Pension Fund Management Company Ltd., Zagreb, Croatia
Lavrač, Vlado, MSc, Institute for Economic Research, Ljubljana, Slovenia
Leguizamon, Juan, PhD, West Virginia University, Department of Economics, Morgantown, USA
Libman, Alexander, PhD, Frankfurt School of Finance, Frankfurt, Germany / Russian Academy of Sciences, Moscow, Russia
Liha, Aida, UNDP-Croatia, Zagreb, Croatia
Lolbert, Tamás, PhD, State Audit Office of Hungary, Budapest, Hungary
Lončarić-Horvat, Olivera, PhD, Faculty of Law, Zagreb, Croatia
Lovrinčević, Željko, PhD, Institute of Economics, Zagreb, Croatia
Ljubaj, Igor, MSc, Croatian National Bank, Zagreb, Croatia
Maehlum, Sverre, Ministry of Finance, Oslo, Norway
Mahieu, Geraldine, International Monetary Fund, Washington D.C., USA
Mamić Sačer, Ivana, PhD, Faculty of Economics and Business, Zagreb, Croatia
Marić, Jakša, MSc, Croatian Postal Bank, Zagreb, Croatia
Markovinović, Hrvoje, PhD, Faculty of Law, Zagreb, Croatia
Martinez-Vazquez, Jorge, PhD, Andrew Young School of Policy Studies, Atlanta, USA
Marušić, Ljiljana, B.A., Croatian Institute for Retirement Insurance, Zagreb, Croatia
Matek, Petar Pierre, MSc, Croatian Financial Services Supervisory Agency, Zagreb, Croatia
Mates, Neven, PhD, Croatian National Bank, Zagreb, Croatia
Medak Fell, Danijela, MSc, Zagreb, Croatia
Mertens, Jo Beth, PhD, Hobart and William Smith Colleges, New York, USA
Mervar, Andrea, PhD, Institute of Economics, Zagreb, Croatia
Mihaljek, Dubravko, PhD, Bank for International Settlements, Basel, Switzerland
Mijatović, Nikola, PhD, Faculty of Law, Zagreb, Croatia
Mikulić, Davor, PhD, Institute of Economics, Zagreb, Croatia
Milas, Goran, PhD, Institute of Social Sciences "Ivo Pilar", Zagreb, Croatia
Miličević, Jurica, Croatian Postal Bank, Zagreb, Croatia
Mrak, Mojmir, PhD, Faculty of Economics, Ljubljana, Slovenia
Mrkalj, Marko, B.A., Croatian National Bank, Zagreb, Croatia
Mullins, Peter, PhD, Faculty of Science, Department of Statistics, Auckland, New Zealand
Neal, Craig, PhD, The World Bank, Washington D.C., USA
Nestić, Danijel, PhD, Institute of Economics, Zagreb, Croatia
Novoselec, Petar, PhD, Faculty of Law, Zagreb, Croatia
Ogata, Kentaro, International Monetary Fund, Washington D.C., USA

FINANCIAL THEORY AND PRACTICE
38 (4) 497-506 (2014)

Ohmann Rowe, Tina, B.A., Independent Consultant, Zagreb, Croatia
Olden, Brian, International Monetary Fund, Washington D.C., USA
Orsag, Silvije, PhD, Faculty of Economics and Business, Zagreb, Croatia
Osmanagić Bedenik, Nidžara, PhD, Faculty of Economics and Business, Zagreb, Croatia
Ott, Katarina, PhD, Institute of Public Finance, Zagreb, Croatia
Paesani, Paolo, PhD, University of Rome Tor Vergata, Faculty of Economics, Rome, Italy
Pale, Predrag, MSc, Faculty of Electrical Engineering and Computing, Zagreb, Croatia
Pavičić, Jurica, PhD, Faculty of Economics and Business, Zagreb, Croatia
Pavlović, Andrea, PhD, Privredna banka Zagreb / Zagreb School of Economics and Management, Zagreb, Croatia
Pavlović, Andreja, Hauska & Partner Group, Zagreb, Croatia
Perić, Renata, PhD, Faculty of Law, Osijek, Croatia
Pervan, Ivica, PhD, Faculty of Economics, Split, Croatia
Petak, Zdravko, PhD, Faculty of Political Science, Zagreb, Croatia
Peteri, Gabor, PhD, LGID Ltd., Budapest, Hungary
Petrović, Suzana, The World Bank, Zagreb, Croatia
Pippin, Sonja, PhD, University of Nevada, Reno, USA
Polšek, Darko, PhD, Faculty of Humanities and Social Sciences, Zagreb, Croatia
Pope, Jeffrey Ivor, PhD, Curtin University, School of Economics and Finance, Perth, Australia
Posedel, Petra, PhD, Zagreb School of Economics and Management, Zagreb, Croatia
Prebble, John, PhD, Victoria University of Wellington, Wellington, New Zealand
Primorac, Marko, PhD, Faculty of Economics and Business, Zagreb, Croatia
Rahman, Jesmin, PhD, International Monetary Fund, Washington D.C., USA
Ravnik, Rafael, M.A., Croatian National Bank, Zagreb, Croatia
Reis, Mourao Paulo Jorge, PhD, University of Minho, Department of Economics, Braga, Portugal
Ridzak, Tomislav, PhD, Croatian National Bank, Zagreb, Croatia
Rismondo, Mihovil, Zagreb, Croatia
Rodin, Siniša, PhD, Faculty of Law, Zagreb, Croatia
Rogić-Lugarić, Tereza, PhD, Faculty of Law, Zagreb, Croatia
Rojec, Matija, PhD, University of Ljubljana, Faculty of Social Sciences, Ljubljana, Slovenia
Rubil, Ivica, M.A., Institute of Economics, Zagreb, Croatia
Saitis, Athanasios, B.A., University of Hohenheim, Faculty of Business, Economics and Social Sciences, Stuttgart, Germany
Samodol, Ante, PhD, Zagreb Holding, Zagreb, Croatia
Sanz, Ismael, PhD, University of Granada, Faculty of Economics, Granada, Spain

FINANCIAL THEORY AND PRACTICE
38 (4) 497-506 (2014)

Schnellenbach, Jan, PhD, Philipps-University, Public Economics, Marburg, Germany

Schönfelder, Bruno, Dr. rer. pol. habil, TU Bergakademie Freiberg, Freiberg, Germany

Scialà, Antonio, PhD, Roma Tre University, Rome, Italy

Simula, Laurent, PhD, Paris School of Economics, Paris, France

Slabe Erker, Renata, PhD, Institute for Economic Research, Ljubljana, Slovenia

Somai, Miklos, PhD, Institute for World Economics of the Hungarian Academy of Sciences, Budapest, Hungary

Sonora, Robert, PhD, Fort Lewis College, Durango, Colorado, USA

Sopek, Petar, Privredna banka Zagreb, Zagreb, Croatia

Stanca, Razvan Victor, MSc, National Bank of Romania, Bucharest, Romania

Stanovnik, Tine, PhD, Faculty of Economics / Institute for Economic Research, Ljubljana, Slovenia

Starc, Nenad, PhD, Institute of Economics, Zagreb, Croatia

Stix, Helmut, PhD, Austrian Central Bank, Vienna, Austria

Stojanović, Alan, PhD, Faculty of Economics and Business, Zagreb, Croatia

Stroligo, Klaudijo, The World Bank, Ljubljana, Slovenia

Stubbs, Paul, PhD, Institute of Economics, Zagreb, Croatia

Stučka, Tihomir, MSc, The World Bank, Washington D.C., USA

Šamota, Davor, PhD, Faculty of Agriculture, Osijek, Croatia

Šćukanec, Ninoslav, MSc, Institute for the Development of Education, Zagreb, Croatia

Šego, Boško, PhD, Faculty of Economics and Business, Zagreb, Croatia

Šimović, Hrvoje, PhD, Faculty of Economics and Business, Zagreb, Croatia

Šišinački, Jelena, PhD, Institute of Economics, Zagreb, Croatia

Škreb, Marko, PhD, International Monetary Fund, Accra, Ghana

Škudar, Alen, Croatian National Bank, Zagreb, Croatia

Šokić, Petar, MSc, Ministry of Science, Education and Sports, Zagreb, Croatia

Šoljan, Vedran, PhD, Zagreb, Croatia

Šonje, Velimir, MSc, Zagreb School of Economics and Management / Arhivanalitika, Zagreb, Croatia

Šorić, Kristina, PhD, Zagreb School of Economics and Management, Zagreb, Croatia

Šošić, Vedran, MSc, Croatian National Bank, Zagreb, Croatia

Štulhofer, Aleksandar, PhD, Faculty of Humanities and Social Sciences, Zagreb, Croatia

Šućur, Zoran, PhD, Faculty of Law, Zagreb, Croatia

Šušteršič, Janez, PhD, University of Primorska, Faculty of Management, Koper, Slovenia

Švaljek, Sandra, PhD, City of Zagreb, Zagreb, Croatia

Tandberg, Eivind, PhD, International Monetary Fund, Washington D.C., USA

Tatomir, Srđan, MSc, Bank of England, London, UK

Teksöz, Utku, PhD, Credit Suisse, London, UK

FINANCIAL THEORY AND PRACTICE
38 (4) 497-506 (2014)

Tepuš, Mladen Mirko, Erste Card Club, Zagreb, Croatia
Terkper, Seth E., MPA, MBA, International Monetary Fund, Washington D.C., USA
Tica, Josip, PhD, Faculty of Economics and Business, Zagreb, Croatia
Tkalec, Marina, PhD, Institute of Economics, Zagreb, Croatia
Tomić, Iva, PhD, Institute of Economics, Zagreb, Croatia
Tosun, Mehmet Serkan, PhD, University of Nevada, Department of Economics, College of Business Administration, Reno, USA
Tran-Nam, Binh, PhD, University of New South Wales, Sydney, Australia
Turković, Ksenija, PhD, Faculty of Law, Zagreb, Croatia
Týč, Vladimir, PhD, Masaryk University, Brno, Czech Republic
Urban, Ivica, PhD, Institute of Public Finance, Zagreb, Croatia
Vamvakidis, Athanasios, PhD, Bank of America Merrill Lynch, Charlotte, USA
van Meurs, Wim, PhD, Radboud University Nijmegen, Nijmegen, Netherlands
van Schaik RA, Frans, PhD, University of Amsterdam, Amsterdam, Netherlands
Vassnes, Erik, PhD, Ministry of Finance, Oslo, Norway
Vehovec, Maja, PhD, Institute of Economics, Zagreb, Croatia
Verbič, Miroslav, PhD, Institute for Economic Research, Ljubljana, Slovenia
Vidačak, Igor, PhD, Government Office for Cooperation with NGOs, Zagreb, Croatia
Vitezić, Neda, PhD, Faculty of Economics, Rijeka, Croatia
Vizek, Maruška, PhD, Institute of Economics, Zagreb, Croatia
Vojinović, Borut, PhD, Institute for Business diagnosis and forecasting / GEA College – Faculty for Entrepreneurship, Ljubljana, Slovenia
Vukina, Tomislav, PhD, North Carolina State University, Raleigh, USA
Vukoja, Oriana, MSc, Faculty of Economics and Business, Zagreb, Croatia
Vukšić, Goran, PhD, Institute of Public Finance, Zagreb, Croatia
Wagener, Andreas, PhD, University of Vienna, Department of Economics, Vienna, Austria
Wehner, Joachim, PhD, London School of Economics and Political Science, London, UK
Wörz, Julia, PhD, Oesterreichische Nationalbank, Vienna, Austria
Yakovlev, Pavel, PhD, West Virginia University, Department of Economics, Morgantown, USA
Zajc, Katarina, PhD, University of Ljubljana Law School, Ljubljana, Slovenia
Zaman Groff, Maja, PhD, Faculty of Economics, Ljubljana, Slovenia
Zito, Anthony, PhD, Newcastle University, School of Geography, Politics and Sociology, Newcastle upon Tyne, UK
Zovko, Ilija Ivan, PhD, Barclays Investment Bank / University of Oxford, London, UK
Zrinščak, Siniša, PhD, Faculty of Law, Zagreb, Croatia
Zuber, Marija, PhD, Croatian Association of Accountants and Financial Experts, Zagreb, Croatia
Zupanc, Darko, MSc, National Examinations Centre, Ljubljana, Slovenia

Žager, Katarina, PhD, Faculty of Economics and Business, Zagreb, Croatia
Žganec, Srećko, PhD, Raiffeisen Mandatory Pension Fund, Zagreb, Croatia
Žigman, Ante, PhD, Croatian National Bank, Zagreb, Croatia
Žilić Ivan, MSc, Institute of Economics, Zagreb, Croatia / University Karlo III, Madrid, Spain
Živković-Matijević, Zrinka, MSc, Raiffeisen Consulting, Zagreb, Croatia
Žunić-Kovačević, Nataša, PhD, Faculty of Law, Rijeka, Croatia
Županov, Josip, PhD, Zagreb, Croatia

List of articles published in "Financial Theory and Practice", vol. 38, 2014

Prepared by MARTINA FABRIS*

doi: 10.3326/fintp.38.4.7

* Martina FABRIS, PhD
Institute of Public Finance, Smičiklasova 21, 10000 Zagreb, Croatia
e-mail: martina.fabris@ijf.hr

Antić, D. Efficiency of a single-rate and broad-based VAT system: the case of Bosnia and Herzegovina. *Financial Theory and Practice*, 38(3), pp. 303-335. doi: 10.3326/fintp.38.3.3

Arbutina, H. and Žunić Kovačević, N. The history of double tax conventions in Croatia. *Financial Theory and Practice*, 38(2), pp. 221-245. doi: 10.3326/fintp.38.2.4

Bađun, M. Global Financial Development Report 2013: Rethinking the Role of the State in Finance / The World Bank – book review. *Financial Theory and Practice*, 38(1), pp. 97-101. doi: 10.3326/fintp.38.1.5

Bajo, A. Anatomija destrukcije: politička ekonomija hrvatskog visokog školstva (An Anatomy of Destruction: the Political Economy of Croatian Higher Education) / Petar Filipić – book review. *Financial Theory and Practice*, 38(3), pp. 375-379. doi: 10.3326/fintp.38.3.5

Bejaković, P. Emerging from the Shadow: A Comparative Qualitative Exploration of Private Tutoring in Eurasia / B. Jokić, ed. – book review. *Financial Theory and Practice*, 38(4), pp. 489-496. doi: 10.3326/fintp.38.4.5

Bronić, M. and Bratić, V. Can the efficiency of the Croatian tax authorities be improved? *Financial Theory and Practice*, 38(3), pp. 253-275. doi: 10.3326/fintp.38.3.1

Gadžo, S. and Klemenčić, I. Time to stop avoiding the tax avoidance issue in Croatia? A proposal based on recent developments in the European Union. *Financial Theory and Practice*, 38(3), pp. 277-302. doi: 10.3326/fintp.38.3.2

Globan, T. The Economics of European Integration / Richard Baldwin and Charles Wyplosz – book review. *Financial Theory and Practice*, 38(2), pp. 247-252. doi: 10.3326/fintp.38.2.5

Grdović Gnip, A. The power of fiscal multipliers in Croatia. *Financial Theory and Practice*, 38(2), pp. 173-219. doi: 10.3326/fintp.38.2.3

Hybka, M. M. Legislative proposal for a controlled foreign companies regime in Poland from an international perspective. *Financial Theory and Practice*, 38(4), pp. 465-487. doi: 10.3326/fintp.38.4.4

Kunovac, M. Employment protection legislation in Croatia. *Financial Theory and Practice*, 38(2), pp. 139-172. doi: 10.3326/fintp.38.2.2

Mačkić, V. Political budget cycles at the municipal level in Croatia. *Financial Theory and Practice*, 38(1), pp. 1-35. doi: 10.3326/fintp.38.1.1

Mateev, M. and Tsekov, I. Are there any top FDI performers among EU-15 and CEE countries? A comparative panel data analysis. *Financial Theory and Practice*, 38(3), pp. 337-374. doi: 10.3326/fintp.38.3.4

Mihaljek, D. Domestic bank intermediation in emerging market economies during the 2008-09 crisis. *Financial Theory and Practice*, 38(4), pp. 381-404. doi: 10.3326/fintp.38.4.1

Šimović, H., Blažić, H. and Štambuk, A. Perspectives of tax reforms in Croatia: expert opinion survey. *Financial Theory and Practice*, 38(4), pp. 405-439. doi: 10.3326/fintp.38.4.2

Škarica, B. Determinants of non-performing loans in Central and Eastern European countries. *Financial Theory and Practice*, 38(2), pp. 37-59. doi: 10.3326/fintp.38.1.2

Slijepčević, S. and Blašković, B. Statistical detection of fraud in the reporting of Croatian public companies. *Financial Theory and Practice*, 38(1), pp. 81-96. doi: 10.3326/fintp.38.1.4

Stanovnik, T. and Verbič, M. Personal income tax reforms and tax progressivity in Slovenia, 1991-2012. *Financial Theory and Practice*, 38(4), pp. 441-463. doi: 10.3326/fintp.38.4.3

Verbič, M., Čok, M. and Šinkovec, D. Some evidence for implementing an enhanced relationship in Slovenia. *Financial Theory and Practice*, 38(1), pp. 61-80. doi: 10.3326/fintp.38.1.3

Vukšić, G. Employment and employment conditions in the current economic crisis in Croatia. *Financial Theory and Practice*, 38(1), pp. 103-138. doi: 10.3326/fintp.38.2.1

The acceptance rate in the period 2005-2014* has been 33%.

* From January 1st, 2005 till November 1st, 2014.

Corrigendum to "Are there any top FDI performers among EU-15 and CEE countries? A comparative panel data analysis" [Financial Theory and Practice, 38 (3), 337-374]

doi: 10.3326/fintp.38.4.8

The publisher regrets having incorrectly stated the professional designation of the author, Iliya Tsekov, as he is not the holder of a CFA designation.

The on-line version of the article was changed on September 15, 2014. Available at: [http://www.fintp.hr/upload/files/ftp/2014/3/mateev_tsekov.pdf].

Editorial Office
Institute of Public Finance – Financial Theory and Practice
Smičiklasova 21, Zagreb, Croatia, P.O. BOX 320
phone: +385 (0)1 4886 444; 4819 363; fax: +385 (0)1 4819 365
web-site: www.fintp.hr; e-mail: fintp@ijf.hr

Subscription
Annual subscription amounts 400 kuna
Payments to account no. HR7024840081100661775, Institut za javne financije, Zagreb; quoting: subscription to Financial Theory and Practice, 2015

Printed in 115 copies

The journal comes out four times a year

The journal is co-financed by the Ministry of Science, Education and Sport of the Republic of Croatia

Computer typesetting and printing
Denona d.o.o., Zagreb, Marina Getaldića 1