DISCUSSIONS ON ESTONIAN ECONOMIC POLICY

Theory and practice of economic policy
in the European Union

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ESTNISCHE GESPRÄCHE ÜBER WIRTSCHAFTSPOLITIK

Wirtschaftspolitische Theorie und Praxis
in der Europäischen Union

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EESTI MAJANDUSPOLIITILISED VÄITLUSED

Majanduspoliitika teooria ja praktika Euroopa Liidus

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FINANTSTURGUDE REGULEERIMINE[1]

Sissejuhatavaid mõtteid praegustest probleemidest

Majanduskriisid võimenduvad finantsturgude destruktiivsete mõjude kaudu sageli kogu süsteemi ohustavalt, mis on eeskätt käesoleval sajandil üha selgemaks saanud. V. Cerra ja S.C. Saxena[2] on näidanud, et häired reaalmajanduses, mis kaasnevad ebastabiilsusega ja häiretega finantssektoris, mõjuvad ülimalt laastavalt eriti arenenud tööstusmaades. Seetõttu muutub avaliku arutelu käigus läänemaailma majandussüsteemide efektiivsus üha küsitavamaks ja järjest rohkem nõutakse kõikehõlmavaid reforme, seda eelkõige pangandussektoris. Siinkohal muutub vajalikuks sotsiaal- ja majanduspoliitika sekkumine. Üha sagedamini tõstatub küsimus, kellel majanduses ja ühiskonnas tervikuna on otsustav sõna öelda – kas demokraatlikul alusel legitimeeritud rahvaesindajatel või hoopis pankade juhatustes ja nõukogudes istuvatel mänedžeridel, kes ülispekulatiivsete, oma huvides tehtavate tehingutega peavad finantsturgudel kasumijahti? Alates finantskriisi puhkemise esimestest nähtustest 2007. aastal on kõikehõlmav finantsturgude reguleerimine hädavajalikum kui kunagi varem, et ei tekiks pankade omahuvide ja üldise hüvangu vastandumist.

Aruteludes on esiplaanile tõusnud nõudmised eesmärgiga selgelt eraldada nn universaalpankade, st laia ärispektriga pankade puhul spekulatiivne investeerimispangandus (eelkõige kauplemine oma vahenditega[3] ja laenude andmine Hedge-fondidele) ning klassikaline laenamine ja hoiustamine („Ringfencing“). Niimoodi oleks võimalik takistada, et pankades, mis riskantsete investeerimistehingute tõttu on rinnutsi ähvardava pankrotiga, ei satuks löögi alla ka kliendipõhised ärivaldkonnad. Nagu kogemused on näidanud, siis tulemusena päästetakse niisugused pangad nende kogu majandust hõlmava tähtsuse tõttu[4] riiklike rahade abil („*bail-out*“). Lõppude lõpuks jääb kogu koorem maksumaksjate kanda[5]. Riik satub väljapressitava rolli. Vältimaks niisuguse olukorra tekkimist edaspidi, tuleb taastada pankade reaalmajandust teenindav funktsioon. Selleks on vaja luua kommertspanku ja investeerimispanku lahushoidev süsteem.

Selles suunas läheb kõige kaugemale Ameerikast pärit ettepanek nimega „Volcker-Rule“[6]. Selle kohaselt ei peaks pankadel üldse olema lubatud Hedge-fondides ja Private-Equity-fondides osalemine, nende omamine ja finantseerimine, samuti

[1] Eesti keelse artikli (mis oli aluseks ka inglise keelse artikli tõlkele) terminoloogiat konsulteeris Eesti Panga Nõukogu esimees (1998-2008), Tartu Ülikooli emeriitprofessor Mart Sõrg

[2] Cerra, V./Saxena, S. C., Growth Dynamics: The Myth of Economic Recovery, IMF Working Paper, 07.08.2005.

[3] „Pangasisene kasiino“, nagu oma vahenditega kauplemist Saksa „Handelsblatt“ 30. jaanuaril 2013 oma esileheküljel nimetab, kuna antud juhul ei pruugita arvestada vastutustundlike klientidega.

[4] Selles seoses räägitakse „süsteemi jaoks olulistest“ pankadest („too big to fail“).

[5] Saksa sotsiaaldemokraadid nimetavad seda „finantsturgude juhitud kapitalismiks“.

[6] See on nime saanud Paul Volcker´i järgi, kes oli 1979-1987 Föderaalreservide Süsteemi (Federal Reserve System) esimees, praegu senaator.

kauplemine oma vahenditega[7] enda riisikol[8]. Euroopa Liidus seevastu pooldatakse rohkem Liikaneni raportit[9]. Kardetakse, et 'Volcker Rule´i' karmide tingimuste tõttu hakkavad keelatud tehingud toimuma nn varipanganduse kattevarjus. Liikaneni komisjon soovitab seepärast, et suured pangad[10] oma traditsioonilised era- ja äriklienditehingud omal riisikol läbiviidavatest riskantsetest finantsturuo-peratsioonidest[11] lahus hoiaksid[12]. Siinkohal peetakse silmas vastavalt OECD-mudelile loodud valdusühinguid (holding companies), mille katuse all õiguslikult, majanduslikult ja organisatoorselt iseseisvad pangalitsentsiga tütarettevõtted oleksid vastutavad igaüks ühe ärivaldkonna eest. Kui investeerimispank peaks oma riskantsete tehingute tõttu maksujõuetuks muutuma, võiks selle sõltumatult kliendipõhisest valdkonnast likvideerida. Krediidi- ja hoiustamistehingud ja seega pangaklientide raha oleksid kaitstud. Sest ainult nendel algsetel pangatehingutel on suhe reaalmajandusega. Sellise lahushoidmise abil saab omavahel eraldiseisvates ettevõtteüksustes tihedalt siduda riski ja vastutuse, mis käivad kaasas ainult kasumisaamisele orienteeritud tegevusega.

Et niisugused lahushoidmise kontseptsioonid ei leidnud pangandusmaailmas heakskiitu, on arusaadav. Vastuargumendid pole aga eriti veenvad. Kulutused ettevõtte struktuurile ei tohiks eriti tõusta, sest suurimat osa ettevõtte baasist – nagu näiteks elektrooniline andmetöötlus – võivad kõik tütarettevõtted koos kasutada ka edaspidi. Siiski poleks investeerimispangandusega tegeleval ettevõtteüksusel enam võimalik lähtuda klientidega tegeleva üksuse reitingutest, mis kindlasti tõstaks selle refinantseerimiskulusid. Küsimus, kas kommerts- ja investeerimispanku lahushoidva süsteemi sisseviimine ohustaks osalevate ELi riikide mainet finantsettevõtete asukohamaadena, puudutaks siiski ainult eraldi tehtavaid investeerimistehinguid.

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[7] Tehingud väärtpaberite, valuuta, väärismetallide ja igat liiki derivaatidega oma vahendeid kasutades.

[8] Selle kohaselt peab pankade tegevus finantsturgudel piirduma klienditellimustega ja pangad ise ei tohi astuda riskantsetesse tehingutesse ainult iseenda spekulatiivsetest motiividest lähtudes. (Hilger, H. A., Aktueller Begriff: der Glass-Steagall Act und die Bankenregulierung (Nr.05/10): Wissenschaftlicher Dienst des Deutschen Bundestages, 10.10.2012).

[9] Nn Liikaneni komisjoni raport. Komisjon kujutab endast EL ekspertide gruppi suurte krediidiasutuste reguleerimiseks: [http://ec.europa.eu/internel_market/bank/docs/high-level_expert_group/report_de.pdf]; raport kannab komisjoni esimehe Erkki Liikaneni nime, kes on Soome Keskpanga president ja seega Euroopa Keskpanga nõukogu liige.

[10] Liikaneni raportis lähtutakse mõiste 'suurpank' kasutamisel oma vahenditega kauplemise protsentuaalsest osast antud panga bilansisummas (alates 15%-st) või/ja oma vahenditega kauplemise absoluutsest suurusest (alates 100 miljardist eurost). Liikaneni raportis soovitatakse piirata mõlema ärivaldkonna lahushoidmise kohustust ja kasutada seda ainult 'suurpankade' puhul. Selline piirang pole seletatav ei mingite praktikast tulenevate põhjustega ja seepärast on alust arvata, et siin on mängus pangandus-*lobby* käsi.

[11] Siia alla ei kuulu äriklientide tellimustehingud finantsturgudel, nagu riski garantiid tegelikult kehtivate, tõsiseltvõetavate lepingute suhtes, millega tahetakse kindlustada kõikumised toorainete hindades ja vahetuskurssides. Sama kehtib ka laenutagatise kindlustuse (Credit Default Swaps, CDS) ja iseenesestmõistetavalt ka ettevõtte osakute emiteerimine kohta. (Vrd siinkohal ka: Eesti majanduspoliitilised väitlused, 2-2012, allmärkus 17).

[12] Seeläbi saaks hoida kauplemine (mida ju loodetakse) oma vahenditega kontrolli all.

Kliendipõhiste pangatehingute jaoks on lähedus reaalmajandusele praktiline hädavajalikkus.

Traditsiooniliste äritehingute lahushoidmine riskantsetest ja komplekssetest investeerimistehingutest on kõige olulisem meede finantsturgude ohjeldamiseks. See eeldab aga siiski seda, et mitte üksnes 'suurpangad' vaid kõik pangad oleksid kohustatud neid kahte põhimõtteliselt erinevat valdkonda teineteisest lahus hoidma. Kui üks või teine pank on ettevõttemajanduslikust seisukohast liiga väike niisugust lahushoidmist läbi viima, siis tuleb niisugusel pangal riskantsetest tehingutest loobuda.

Kui on tagatud, et oma vahenditega kauplemisega tegelevatel kontserni tütarettevõtetel pole juurdepääsu keskpangale ja et eranditult klientidele orienteeritud krediidiasutused ei tegele investeerimispangandusega ega tohi seda refinantseerida, on küsimus, kas oma vahenditega kauplemist tuleb üldiselt piirata või koguni keelata, teisejärgulise tähtsusega. Igal juhul tuleb ära keelata aga puhtalt spekulatiivsed vahendid (forvardid). Neil süsteemile ohtlikel ja osaliselt ebamoraalsetel tuletistehingutel pole mingit seost reaalmajandusega. Säärased tehingud põhinevad ootustel, et tulevikus muutuvad kaupade nagu agraartoodete või toorainete hinnad, mille peale siis spekuleeritakse. Möödanik on näidanud, et sellised pankade sekkumised majanduse toimimisse põhjustavad hinnaekstsesside tekkimist. Need omakorda ohustavad elanikkonna korrapärast varustamist toiduainetega - seda eriti maailma vaeseimates regioonides – ja tootvaid majandusharusid vahetoodetega.

Ülejäänud lahushoitavate pangatehingute puhul on tegu spekulatiivse kauplemisega oma vahenditega, mille eesmärgiks on valuuta, väärtpaberite ja muude õiguste noteerimine. Ka neid teostatakse oma nimel ja omal riisikol, niisiis ei ole need kliendipõhised. Niisuguse kauplemine käib – nagu ka praeguste forwardtehingute puhul – mitte börsidel, vaid väljaspool kontrollitavaid turge, nn vabavahetusturu lepingutega. Kuna niisugused tehingud pole enamjaolt küllaldaselt omakapitaliga tagatud, võivad need nurjunud spekuleerimise korral hõlpsasti viia teostaja maksejõuetuseni ja rahvamajanduslike vastastikuste sõltuvuste tõttu vallandada ahelreaktsiooni. Seetõttu ongi nii tähtis, et kirjeldatud liiki tehinguid saaks põhimõtteliselt sooritada ainult kõrgemalseisva instantsi loal[13] ja need oleks allutatud ka selle instantsi kontrollile.

Järgides Euroopa parlamendi nõudmist tuleb panku kohustada – ja see puudutab Läänemaailmas rahvusvaheliselt tegutsevaid suurpanku – oma bilansis näidatud kasum ja nende pealt makstud maksud lahti kirjutada riikide järgi, kus nad tegutsevad. Niisugune avalikustamine võimaldab tunduvalt raskendada äride

[13] Analoogselt 'Dodd Franki regulatsioonile' USA-s näeb Euroopa määrus 'European Market Infrastructure Regulation' (EMIR) ette, et OTC-derivaadid peavad olema tulevikus põhimõtteliselt tagatud ja sõlmitud „kesksete vastaspoolte“ (Central Counterparties, CCP) kaudu ja need tuleb registreerida keskses tehingute registris.

üleviimist maksuoaasidesse ja aitab võidelda agressiivsete maksu-manipulatsioonidega.

Turumajanduses peab kehtima ja püsima jääma põhimõte, et majandussubjektid, kes suurte kasumite ja boonuste jahil sooritavad riskantseid transaktsioone, nende eest ka täiel määral vastutavad. Risk, vastutustunne ja seega ka vastutus kuuluvad lahutamatult kokku. Ei tohi olla niisugust olukorda, et pangad oma süsteemitähtsuse tõttu võivad kindlad olla riigi abile, st lõppude lõpuks maksumaksja abile. Tendentsina tekib kiusatus ülemääraste riskide võtmiseks (*moral hazard*), mille läbi tõuseb kogu süsteemi haavatavus ja kalduvus kriiside tekkimiseks. Kahjumit ei tohi sotsialiseerida, samal ajal kui kasumi, meeletult kõrgete mänedžeride palkade ja boonuste privatiseerimine jääb püsima. Kahjumeid, mida ei saa muul viisil tasakaalustada, tuleb enda kanda võtta vastutavatel juhtijatel ja pankade omanikel. Konkreetselt tähendab see järgmist: maksejõuetuse korral peavad vastutavad mänedžerid teatud ajavahemiku jooksul saadud (näiteks viimase viie kuni kümne aasta) palga tekkinud kahjumi katmiseks vähemalt osaliselt ettevõttele tagastama ja aktsionärid loovutama oma osakud[14] vahetusena võlausaldajatele nõuete vastu („*debt-equite-swaps*“, „*bail-in*“).

Boonuste maksmisele, mis algse mõtte järgi makstakse eriti heade saavutuste eest, tuleb teisiti läheneda. Kuna edu või ebaõnnestumine saab selgeks alles mitmete aastate möödudes, siis ei tohi boonuseid otsekohe sularahana välja maksta. Boonuseid jagatakse alguses ainult võlakirjadena – teatud määral tagatisvõlakitjade vormis. Pärast viie- kuni kümneaastase tähtaja möödumist võib neid võlakirju sularahaks teha eeldusel, et pank ei ole nimetatud ajavahemiku jooksul maksujõuetusse sattunud[15]. Võimalik, et boonuste saajate kollektiivvastutusel tekiks ka veel kõrvalefekt – igaüks neist teadvustaks tekkida võivaid probleeme teravamalt ja arvestaks oma tegutsemisega kaasnevaid riske ja jälgiks ka kriitilisemalt oma kolleegide tegutsemist. Niisugune reegel mõjuks järelikult distsiplineerivalt.

Kui mõnel juhtumil on võlad suuremad kui panga põhikapital – kaasa arvatud omakapitali vahetuslepingud - siis võiks mõelda ka sellele, et võlgade kärpimise või täielikult nõuetest loobumise abil ka võlausaldajaid kahjumi kandmisse kaasata. See võiks aga juba niikuinii raskustesse sattunud pankade refinatseerimiskulusid tunduvalt tõsta. Seepärast oleks niisugustel juhtudel õigem valida see tee, et muuta võlausaldajate nõuded kohustuslikeks võlakirjadeks, niisiis tagatisvõlakirjade meetod koos potentsiaalse põhikapitali korrespondeeriva tõstmisega.

2012. aasta septembris otsustasid euroala riigi- ja valitsusjuhid, et euromaade rahadega finantseeritavat Euroopa stabiilsusmehhanismi (*European Stability Mechanism*, ESM) saab otse kasutada abimaksete tegemiseks hättasattunud

[14] Ja ka pangamänedžerid oma varem saadud tulemuspreemiatena väljastatud aktsiad ja aktsiaoptsioonid.

[15] Võiks mõelda, et ka boonuste väljamaksmise eeldus viia sõltuvusse sellest – järgnedes „Union de Banques Suisses“ (UBS) näitele –, et omakapitali kvoot ei langeks allapoole teatud piiri (nimetatud juhul allapoole 7%-i).

pankadele. See rikub selgelt põhimõtet, et äriüksuste saneerimiseks ei tohi kasutada riiklikke vahendeid, vaid ainult eramajanduslikust sektorist pärit rahalisi vahendeid. Vältimaks tulevikus kriisiaegadel pankade saneerimisotstarbel maksurahade väärkasutamist, tuleb Euroopa seaduse[16] alusel luua pankadele kuuluv restruktureerimise fond, kust saab finantsabi üksnes kohustuslike tingimuste täitmise korral. Nõiaringist, mis on tekkinud finantssektori ja riikide võlgade tiheda põimumise tõttu, tuleb ükskord ometi läbi murda. Selles mõttes tohib kirjeldatud fondi finantseerida ainult pangandusest endast pärit rahadega. Sellisse päästefondi võib integreerida ka likvideerimisfondi, mis kannaks vajaduse korral maksujõuetuks muutunud pankade katteta kulud. Haldamine tuleb ülesandeks teha mõnele Euroopa Keskpangast sõltumatule Euroopa finantsstabiliseerimisasutusele.

Et juba eelnevalt tagada tekkida võivate kahjumite leevendamine, tuleb hoolitseda piisava omakapitali olemasolu eest. See oli Baseli komisjoni nõupidamiste teemaks juba 1988. aastal. Ent vastuvõetud otsused (Basel I) arvestavad vajaliku garantiikapitali suuruse määramisel üksnes ebapiisavalt üksikute aktivate ja likviidsusaspektide erineva suurusega riske. Hilisemad otsustepaketid Basel II ja Basel III peavad need lüngad likvideerima. Basel II näeb ette riskantsetele aktivatele erineva suurusega omakapitali tagatise loomist (näiteks väljastatud krediidid vastavalt võlgniku maksejõulisusele/ reitingule)[17]. Basel III läheb veel kaugemale, tuues lisaks sisse veel kaks likviidsusprofülaktika näitajat: nn *Liquidity Coverage Ratio* (LCR, „likviidsuspuhver“) ja Net Stable Funding Ratio (NSFR). Mõlema näitaja kohaselt peavad pangad kohustuslikule omakapitalile lisaks säilitama veel piisavalt suure likviidsuse. Konkreetselt tähendab see seda, et pankade likviidsuse seis (ülilikviidsed aktivad pluss kindlad refinantseerimisvõimalused) peaks olema kõrgem kui vajalik likviidsus (oodatavad likviidsusäravoolud pluss vajalik stabiilne refinantseerimine).

Nende eelduste põhiidee on õige. Vaadeldes aga nende võimalikke tagajärgi, on siiski vajalik asja üle veel järele mõtelda. On karta, et kirjeldatud näitajad ajendavad panku lühiajalisi laene andma või vaba likviidsust kasutama kindlate väärtpaberite otsmiseks, selle asemel et pikaajalisi laene võimaldada. Arengutendents viiks siis sinna, et ettevõtted – ja seda eriti kriisiaegadel – oleksid rinnutsi suuremate raskustega oma pikaajaliste investeeringute finantseerimisel. Selline efekt võiks moodsate tasakaaalustamiseeskirjade tõttu protsükliliselt veelgi tugevneda. Sest kui pangad bilansseerivad oma aktivaid aktuaalsete turuväärtuste järgi, siis kõrgkonjunktuuri ajal viib see küll omakapitali suurenemiseni, ent kriisiaegadel selle vähenemiseni. Kas ja millal neid omavahel seotud probleeme on Euroopa Keskpanga juurde loodud Euroopa Süsteemsete Riskide Komisjonil (*European*

[16] Saksa pankade restruktureerimisseaduse eeskujul aastast 2010. Silmas pidades praegu veel erakorraliselt erinevaid finantsraskusi üksikutes euroriikides tuleks – ja seda võiks kaaluda - üleminekuajal kuni Euroopat haaranud finantskriisist jagusaamiseni riikidevahelise pankade fondi asemel esialgu sisse seada rahvuslikud restruktureerimisfondid, mida siis hiljem ühendataks ühtseks Euroopa fondiks.

[17] Nõupidamised uue ELi omakapitali direktiivi üle (CRD IV) ja juurdekuuluva määruse (CRR) üle pole ikka veel rahuldava lõpptulemuseni jõudnud.

Systemic Risk Board, ESRB) võimalik lahendada, on suuresti küsitav. Siiani pole selles mõttes mitte midagi toimunud.

Nagu kogemused on näidanud, võib ülikiire kauplemine[18] väärtpaberiturgudel mõjuda erakordselt destabiliseerivalt. Moodne andmetöötlustehnika võimaldab maakleritel arvutipõhiste algoritmide abil mikrosekundite võrra ennetada võõraid ordereid, kombineerida samasuunalisi ja vahetult järgnevaid vastassuunalisi tehinguid ning niiviisi kasumit teenida[19]. Paljudel juhtudel on taolisel viisil tegutsejate sihiks kõigest väärtpaberiturgude reaktsiooni testimine. Säärased eksitavad signaalid võivad esile kutsuda ekstsessiivseid kursiarenguid ja finantsväärtuste hävitamist paljude miljardite ulatuses[20], ilma et see kuidagi vastaks tegelikele arengutele reaalmajanduses.

Vältimaks tulevikus sellist perversset kauplemispraktikat, peab kindlaks määrama börsitellimuste miinimumkestvuse[21], mida Euroopa Parlamendi majanduskomisjon ka soovitab. Kestvust tuleb arvutiprogrammidega rangelt jälgida. Seniks kuni Euroopa Liidus jõutakse niisuguse kõigile kohustusliku regulatsioonini, on vajalik leida vahepealseid lahendusi. Esmajoones peavad maaklerid ja fondiettevõtted, kes tahavad tegeleda finantsturgudel arvutipõhise automatiseeritud kauplemisega, kõigepealt taotlema eraldi tegevusloa, et nende tegevust[22] saaks rangelt kontrollida. Eksitavad tellimusi/ordereid, mille eemärk pole konkreetsete äritehingute sõlmimine, tuleb karistada drastiliste rahatrahvidega. Täiendavalt tuleb kauplemiskohtade/börside ärijuhtkondi kohustada ebatavaliste kursiarengute korral otsekohe kauplemine peatada ja põhjused välja selgitada. Veelgi enam – orderite ja tehingute suhet tuleb pidevalt jälgida (*order-to-trad-ratio*), et avastada reeglite rikkumisi ja õigeaegselt takistada väärarenguid.

Pangandussektoris makstavad juhatuste ja nõukogude tasud, kõrgemate juhtivtöötajate palgad ja samuti boonused on tänaseks võtnud niisugused mõõtmed, mida laia avalikkuse silmis on võimatu õigustada. Taoline areng ohustab ühiskonna kokkukuuluvust. Arusaadava tasustamissüsteemi nõuete formuleerimisel tuleb boonused ja põhipalk viia üldisesse seosesse. Kui reglementeerida üksnes

[18] Vrdl siinkohal: Lattemann, CH. (ja teised), High Frequency Trading – Costs and Benefits in Securities Trading and its Necessity of Regulations, in: Business & Information Systems Engineering, Vol. 4, 2012, 2. väljaanne, lk 93 – 108.

[19] Mis üksikjuhtumil võivad olla imeväikesed, tervikuna aga moodustavad suuri summasid.

[20] Nagu näiteks 6. mail 2010 USA aktsiaturgudel, kui Dow-Jones-Industrial-Average-Index kaotas minutite jooksul rohkem kui üheksa protsenti, mis vastas 1000-punktilisele kahjumile (*Flash Crash*). Põhjustajaks oli väär order, mis viis selleni, et ülikiirete maaklerite IT-süsteemid paiskasid millisekunditega börsile arvutult tellimusi.

[21] Euroopa Parlamendi majanduskomisjon pooldab orderi miinimumkestvusena 0,5 sekundit. See on kindlasti liiga lühike.

[22] Kaasa arvatud nende poolt rakendatavaid algoritme. Alates 30. juulist 2012 arutatakse Saksamaal vastavat seaduseelnõu ('Seadus ülikiiruskauplemisel tekkivate ohtude ja kuritarvitamiste vältimiseks' – Ülikiiruskauplemise seadus). Sellele tulevasele seadusele tahetakse allutada ka kauplemistehingud, mida sõlmitakse väljaspool avalikku väärtpaberitega kauplemist börsil (*Dark pool of liquidity*).

boonuseid, eksisteeriks edaspidigi võimalus põhipalku niimoodi muuta, et soovitud tulemus ikkagi saavutataks. Sel põhjusel peavad kindlaksmääratud põhipalgad olema aluseks ühiskonnapoliitiliselt õigustatud ja arusaadavale regulatsioonile.

Kõige lihtsam lahendus oleks, kui finantsõiguses määrataks kindlaks fikseeritud palkade maksimummäär[23], et neid tunnustataks kui ettevõtte personalikulutusi. Sama kehtiks siis ka „*uno actu*" boonuste kohta, kui neid piirata põhipalgaga. Seeläbi saaks takistada, et maksumaksjad ülepaisutatud pankurite palku nii-öelda „subventsioneeriksid", kuna pankade maksustatavad kasumid on väikesed ja seeläbi ka riigi maksusissetulekud. Sellised regulatsioonid ei rikuks turumajanduse vabaduse põhimõtet. Ka edaspidi jääks iga ettevõtte otsustusõigusega komisjoni kaaluda, kas etteantud piiriväärtusi ületada, kui on vaja rahvusvahelise konkurentsi tingimustes kõrgelt kvalifitseeritud juhtivat personali palgata. Pankade jaoks tähendaks sellised eeskirjad seda, et maksimummäärast kõrgemad palgad tuleks maksta kasumist, millest maksud on juba maha arvutatud.

Kirjeldatud maksuõiguslik lähenemisviis ei saa põhiõiguslikust seisukohast lähtudes kehtida üksnes pangandussektoris. See peab hõlmama kõiki majandusettevõtteid. See aga omakorda eeldab maksuseadusandluse ühtlustamist kogu Euroopa Liidu ulatuses, seega praktiliselt fiskaalliidu loomist. Kuni aga EL niikaugele jõuab ja üksikud liikmesriigid oma rahvuslikust maksusüsteemist ühtse Euroopa maksuameti kasuks loobuvad, selleks tuleb veel pikk tee käia. Niikaua aga tuleb leida sotsiaalselt õigustatud ja arusaadavate tasustamisstruktuuride loomiseks vahepealne lahendus.

Seepärast tulebki kõigepealt fikseerida põhipalkade ülemmäär, kusjuures võib sellest piirist ka rohkem maksta, ent seda ainult erijuhtudel ja kindlate, sotsiaalselt veel õigustatavate intervallide alusel. Silmapaistvate tulemuste saavutamine annab õiguse boonustele, ja nimelt maksimaalselt põhipalga ulatuses. See varieeruv tasuvorm ei kuulu profülaktilist riskivastutust arvestades kohe väljamaksmisele, vaid seda tuleb teha tagatisvõlakirjade vormis. Niisuguste väärtpaberite intressimäär peab õigluse mõttes olema kaks kuni kolm protsendipunkti kõrgem kui sarnaste tavalaenude intressimäär, niisiis, kõrgem kui nn erakorraliste vahetatavate võlakirjade „*Contingent-Converitble-Bonds*" (lühidalt *CoCoBonds*). Väljamaksed juhatuse ja nõukogu liikmetele, samuti kõikidele kõrgepalgalistele juhtivtöötajatele tuleb eranditult avalikustada. Palgasuuruste avalikustamisel võib olla mõõdukust soodustav mõju.

Finantsturgude reguleerimise nõudeid peab kontrollima kõrgemalseisev instants. Ainult tugev tsentraalne järelevalve on võimeline finantsturge distsiplineerima. Kui kõrgem järelevalve jätta rahvuslike pangainspektorite hooleks, siis võib karta, et nad kodumaiseid panku ebapiisava rangusega kontrollivad.

Euroala riigi- ja valitsusjuhid otsustasid, et selle ülesande peab enda kanda võtma Euroopa Keskpank. Seejuures on eelkõige tähtis, et nii institutsionaalselt kui ka

[23] Kusjuures võib tekkida raskusi sellega, et seda määra tuleks pidevalt kohandada majandusliku arenguga, eelkõige hindade arenguga.

personali osas hoitaks kindlalt lahus rahapoliitika ja järelevalve vältimaks huvide konflikti teket. See kehtib esmajoones hindade nivoo stabiilsust silmas pidades. Oluline on samuti selge ülesannete jaotus Euroopa Keskpanga ja üksikute riikide järelevalve teostajate vahel ning samaaegne tiheda koostöö jätkamine. Koostöö on tähtis ka seepärast, et riikide keskpankadel on vahetu kontakt kohalike pankadega ja järelikult tunnevad nemad kõige paremini riigile omaseid struktuure ja ka kohalike ärimudelite ja finantstehingute iseärasusi. Need teadmised võimaldavad paremini võrrelda praktiseeritavaid strateegiaid. Ent siiski – Euroopa pangajärelvalvel peab olema koostöös iga riigi järelvalvega õigus otse sekkuda kriisimaade maksujõuetute pankade tegevusse, et ergutada nende jätkusuutlikku rekapitaliseerimist.

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REGULIERUNG DER FINANZMÄRKTE

Gedanken zur gegenwärtigen Problematik

Wirtschaftskrisen – und das ist vor allem in diesem Jahrhundert immer deutlicher geworden – werden oft durch destruktive Einflüsse der Finanzmärkte in systembedrohender Weise verschärft. Untersuchungen von V. Cerra und S. C. Saxena[1] haben gezeigt, dass Störungen in der Realwirtschaft, die mit Turbulenzen im Finanzsektor einhergehen, besonders in entwickelten Industrieländern in höchstem Maße zersetzend wirken. Das hat in den öffentlichen Diskussionen dazu geführt, dass die Effizienz westlicher Wirtschaftssysteme zunehmend infrage gestellt wird und umfassende Reformen, vor allem im Bankensektor, gefordert werden. Sozialökonomie und Politik sind hier gefordert. Es stellt sich immer häufiger die Frage, wer in Wirtschaft und Gesellschaft das Geschehen bestimmt: Sind es die demokratisch legitimierten Volksvertreter oder gar die Manager in den Vorständen und Aufsichtsräten der Banken, die mit hoch spekulativen Eigengeschäften an den Finanzmärkten auf Renditejagd gehen? Seit Ausbruch der Finanzkrise Mitte 2007 ist eine umfassende Finanzmarktregulierung heute dringlicher denn je, damit die Eigeninteressen der Banken dem Gemeinwohl nicht mehr widersprechen.

Im Vordergrund der Diskussionen stehen Forderungen, die darauf abzielen, bei Banken mit vielschichtiger Geschäftstätigkeit, den sogenannten Universalbanken, das spekulative Investment-Banking – vor allem den Eigenhandel[2] und die Gewährung von Krediten an Hedge-Fonds – von den klassischen, standardisierten Kredit- und Einlagengeschäften ('Retail-Banking') zu trennen ('Ringfencing'). Damit soll verhindert werden, dass bei Banken, die aufgrund riskanter Investment-Geschäfte insolvent zu werden drohen, auch deren kundenbezogene Betriebsbereiche in Mitleidenschaft gezogen werden. Das führt dann erfahrungsgemäß dazu, dass diese Banken wegen ihrer gesamtwirtschaftlichen Bedeutung[3] durch Einsatz öffentlicher Gelder ('Bail-out') gerettet werden. Letztendlich hat dann der Steuerzahler die Lasten zu tragen.[4] Der Staat wird erpressbar. Um das zukünftig zu verhindern, muss den Banken wieder eine dienende Dienstleistungsfunktion gegenüber der Realwirtschaft zugewiesen werden. Dazu werden Trennbankensysteme gefordert.

Am weitesten geht in diese Richtung die amerikanische 'Volcker-Rule'.[5] Danach soll es Banken grundsätzlich nicht mehr gestattet sein, sich an Hedgefonds und Private Equity Fonds zu beteiligen, sie zu besitzen oder zu finanzieren und

[1] Cerra, V./Saxena, S. C., Growth Dynamics: The Myth of Economic Recovery, IMF Working Paper, 07.08.2005.

[2] das 'bankinterne Kasino', wie der Eigenhandel im deutsches 'Handelsblatt' vom 30.01.2013 (Seite 1) bezeichnet wird, weil dabei keine Rücksichten auf verantwortungsbewusste Kunden genommen zu werden brauchen.

[3] in diesem Zusammenhang wird von 'systemrelevanten' Banken gesprochen ('too big to fail').

[4] Die deutschen Sozialdemokraten nennen das einen 'finanzmarktgetriebenen Kapitalismus'.

[5] genannt nach Paul Volcker, der von 1979 bis 1987 Vorsitzender des Federal Reserve System's der USA war und heute Senator ist.

Eigenhandelsgeschäfte[6] auf eigenes Risiko zu betreiben.[7] In der Europäischen Union folgt man dagegen eher dem Liikanen-Bericht.[8] Man befürchtet, dass mit den strengen Bestimmungen der 'Volcker-Rule' die verbotenen Geschäfte in die Grauzone sogenannter Schattenbanken getrieben werden könnten. Die Liikanen-Kommission empfiehlt deshalb, dass große Banken[9] ihre traditionellen Privat- und Firmenkundengeschäfte von den auf eigene Rechnung durchgeführten riskanten Finanzmarktoperationen[10] lediglich abschirmen.[11] Gedacht wird dabei gemäß dem OECD-Modell an Holdings, unter deren Dach rechtlich, wirtschaftlich und organisatorisch selbstständige Tochterunternehmungen mit Banklizenzen jeweils für einen der beiden Geschäftsbereiche verantwortlich sind. Sollte die Investmentbank aufgrund ihrer risikoreichen Geschäfte zahlungsunfähig werden, könnte sie unabhängig vom kundenbezogenen Bereich abgewickelt werden. Kredit- und Anlagengeschäfte und damit die Einlagen der Bankkunden wären somit geschützt. Denn nur diese originären Bankgeschäfte haben einen Bezug zur Realwirtschaft. Durch diese Trennung können lediglich auf Gewinn abzielendes Risiko und Haftung bei den ausgegliederten Unternehmungseinheiten eng verbunden werden.

Dass die Trennkonzepte in der Bankenwelt keine Zustimmung finden, ist verständlich. Die Gegenargumente sind aber wenig überzeugend. Die Kosten der betrieblichen Infrastruktur der Banken dürften kaum steigen, weil der größte Teil dieses Unterbaus – wie zum Beispiel die EDV – weiterhin von beiden Holding-Töchtern gemeinsam genutzt werden könnte. Allerdings wäre es der auf die

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[6] Handel mit Wertpapieren, Devisen, Edelmetallen und Derivaten aller Arten auf eigene Rechnung.

[7] Banken müssen danach ihre Aktivitäten an den Finanzmärkten auf Kundenaufträge beschränken und dürfen selbst keine riskanten Positionen aus eigenen spekulativen Motiven eingehen. (Hilgers, H. A., Aktueller Begriff: Der Glass-Steagall Act und die Bankenregulierung (Nr. 05/10), in: Wissenschaftlicher Dienst des Deutschen Bundestages, 10.10.2012.

[8] einem Bericht der sogenannten Liikanen-Kommission, die eine EU-Expertengruppe zur Regulierung großer Kreditinstitute ist: http://ec.europa.eu/internal_market/bank/docs/high-level_expert_group/report_de.pdf; der Bericht trägt den Namen des Ausschussvorsitzenden Erkki Liikanen, der Präsidenten der finnischen Zentralbank und damit Mitglied des EZB-Rates ist.

[9] Im Liikanen-Bericht wird der Begriff 'Großbank' auf den prozentualen Anteil der Eigenhandelsgeschäfte an der Bilanzsumme der betreffenden Bank (ab 15 %) oder/und die absolute Höhe des Eigenhandels (ab 100 Mrd. Euro) bezogen. Die im Liikanen-Bericht empfohlene Einschränkung der Pflicht zur Trennung der beiden Geschäftsbereiche auf 'Großbanken', die durch keine praxisbezogenen Gründe zu erklären ist, lässt vermuten, dass hier die Banken-Lobby doch einen gewissen Einfluss ausgeübt hat.

[10] Nicht hierunter fallen Finanzmarktaktivitäten im Auftrag von Firmenkunden, wie Risikoabsicherungen für tatsächlich bestehende, seriöse Verträge, mit denen durch Termingeschäfte unter anderem Schwankungen von Rohstoffpreisen oder Wechselkursen abgesichert werden sollen. Gleiches gilt für Kreditausfallversicherungen (Credit Default Swaps, CDS) und selbstverständlich auch für die Ausgabe von Unternehmungsanleihen. (Vergleiche hierzu auch: Estnische Gespräche über Wirtschaftspolitik, Jahrgang 20, Berlin/Tallinn 2012, Band 2, Anmerkung 17 bzw. 16).

[11] Dadurch könnten diese Eigenhandelsgeschäfte – so ist zu hoffen – im kontrollierten Bereich gehalten werden.

Investmentgeschäfte beschränkten Unternehmungseite nun nicht mehr möglich, von den Ratings des kundenbezogenen Bereiches zu profitieren, was sicherlich deren Refinanzierungskosten erhöhte. Die Frage, ob durch die Einführung eines Trennbankensystems die Finanzstandorte der teilnehmenden Länder in der Europäischen Union in Gefahr geraten, betrifft allenfalls die separierten Investmentgeschäfte. Für die kundenbezogenen Bankgeschäfte ist die Nähe zur Realwirtschaft eine praktische Notwendigkeit.

Die Trennung der traditionellen Geschäfts- von den riskanten und komplexen Investmentaktivitäten ist die wichtigste Maßnahme zur Bändigung der Finanzmärkte. Das setzt allerdings voraus, dass nicht nur 'Großbanken', sondern alle Banken dazu verpflichtet werden, diese grundverschiedenen Bereiche voneinander zu trennen. Ist die eine oder andere Bank aus betriebswirtschaftlichen Gründen zu klein für eine solche Trennung, dann muss sie auf die riskanten Geschäfte verzichten.

Sofern sichergestellt ist, dass die Eigenhandel betreibenden Konzerntöchter keinen Zugang zur Zentralbank haben und die ausschließlich kundenorientierten Kreditinstitute sich weder an Investmentbanken beteiligen noch diese refinanzieren dürfen, ist die Frage, ob der Eigenhandel generell beschränkt oder gar verboten werden sollte, von untergeordneter Bedeutung. Verboten werden müssen aber auf alle Fälle die rein spekulativen Warentermingeschäfte. Diese systemgefährdenden und zum Teil auch unmoralischen Derivate haben keinen unmittelbaren Bezug zur Realwirtschaft, obwohl das Präwort diesen Eindruck entstehen lässt. Grundlage dieser Geschäfte sind Erwartungen an zukünftige Preisveränderungen von Waren, wie Agrarprodukte und Rohstoffe, auf die spekuliert wird. Die Vergangenheit hat gezeigt, dass solche Eingriffe der Banken in das Wirtschaftsgeschehen oft zu Preisexzessen geführt haben. Diese gefährden die bedarfsgerechte Versorgung der Bevölkerung mit Nahrungsmitteln – insbesondere in den ärmsten Regionen der Erde – und der produzierenden Wirtschaft mit Vorleistungsgütern.

Bei den übrigen auszugrenzenden Bankaktivitäten handelt es sich um spekulative Eigenhandelsgeschäfte, die auf Notierungen von Devisen, Wertpapieren oder sonstigen Rechten abzielen. Auch sie werden im eigenen Namen und auf eigene Rechnung durchgeführt, sind also nicht kundenbezogen. Diese Geschäfte werden zum größten Teil – wie die heutigen Warentermingeschäfte – nicht über Börsen, sondern abseits beaufsichtigter Märkte als sogenannte Over-the-Counter-Derivate (OTC) durchgeführt. Da sie meistens nicht mit genügend Eigenkapital unterlegt sind, können sie bei Fehlspekulationen leicht zu Insolvenzen der Agierenden führen und aufgrund der volkswirtschaftlichen Interdependenzen Kettenreaktionen auslösen. Deshalb ist es wichtig, dass Geschäfte dieser Art grundsätzlich der Genehmigung und strengen Kontrolle einer übergeordneten Instanz[12] unterliegen.

[12] Analog zur 'Dodd-Frank'-Regulierung in den USA sieht die europäische Verordnung 'European Market Infrastructure Regulation' (EMIR) vor, dass OTC-Derivate zukünftig grundsätzlich über sogenannte 'zentrale Gegenparteien' (Central Counterparties, CCP) abgesichert, durchgeführt und an zentrale Transaktionsregister gemeldet werden müssen.

Nach den Beschlüssen des Europaparlaments sind die Banken zukünftig (ab 2014) dazu verpflichtet – und das betrifft im Westlichen die international agierenden Großbanken –, in ihren Bilanzen die Gewinne und die darauf entrichteten Steuern nach Ländern aufzuschlüsseln, in denen sie tätig sind. Durch eine solche Offenlegung können Verlagerungen von Geschäften in Steueroasen erheblich erschwert und aggressive Steuermanipulationen wirksam bekämpft werden.

In Marktwirtschaften muss der Grundsatz gelten und aufrechterhalten werden, dass Wirtschaftssubjekte, die zur Erzielung hoher Gewinne und Boni riskante Transaktionen vornehmen, dafür in vollem Umfang haften. Risiko und Verantwortung und damit Haftung gehören untrennbar zusammen. Es darf nicht sein, dass Banken sich aufgrund ihrer Systemrelevanz auf die Hilfe des Staates, also letztendlich des Steuerzahlers verlassen können. Das verführt in der Tendenz dazu, überhöhte Risiken (Moral Hazard) einzugehen, wodurch die Krisenanfälligkeit des gesamten Systems steigt. Verluste dürfen nicht sozialisiert werden, während Gewinne sowie exorbitant hohe Managergehälter und Boni privatisiert bleiben. Verluste, die nicht mehr anderweitig ausgeglichen werden können, müssen in erster Linie von den verantwortlichen Führungskräften und den Eigentümern der Banken getragen werden. Konkret bedeutet das: Bei Insolvenz haben

- die verantwortlichen Manager ihre über einen bestimmten Zeitraum bezogenen Gehälter – beispielsweise der letzten fünf bis zehn Jahre – zur Deckung der entstandenen Verluste zumindest teilweise in die Unternehmung wieder einzubringen und
- die Aktionäre ihre Anteilscheine[13] den Gläubigern im Austausch gegen deren Forderungen zu überlassen ('Debt-Equite-Swaps durch Bail-in').

Mit Boni, welche vom Grundgedanken her für besonders erfolgreiche Leistungen gezahlt werden, muss anders verfahren werden. Da sich der Erfolg oder Misserfolg einer Leistung erst nach Ablauf mehrerer Jahre herausstellt, sind Boni nicht sofort als Barleistung zu gewähren. Sie dürfen zunächst nur als Schuldverschreibungen – gewissermaßen als 'Bail-in-Bonds' – zugeteilt werden. Nach einer Sperrfrist von fünf bis zehn Jahren würden diese Anleihen dann fällig und könnten ausgezahlt werden, vorausgesetzt, die Bank ist in dieser Zeit nicht zahlungsunfähig geworden.[14] Die Kollektivhaftung der Bezieher von Boni hätte möglicherweise noch den Nebeneffekt, dass jeder Einzelne die langfristigen Risiken seines Handelns problembewusster berücksichtigen und auch die Aktivitäten der Kollegen kritischer beobachten würde; eine solche Regelung wirkte insoweit disziplinierend.

Sind im Einzelfall die Schulden höher als das Grundkapital – einschließlich 'Debt-Equite-Swaps – der betreffenden Bank, dann kann daran gedacht werden, durch

[13] und auch die Bankmanager ihre zuvor als Erfolgsprämien erhaltenen Aktien und Aktienoptionen.

[14] Es könnte auch daran gedacht werden, – dem Beispiel der 'Union de Banques Suisses' (UBS AG) folgend – die Auszahlung der Boni von der Voraussetzung abhängig zu machen, dass eine bestimmte Eigenkapitalquote (im konkreten Fall 7 %) nicht unterschritten wird.

Schuldenschnitt oder gänzlichen Forderungsverzicht auch die Gläubiger an den Lasten zu beteiligen. Das könnte allerdings die Refinanzierungskosten der ohnehin schon in Bedrängnis geratenen Banken deutlich erhöhen. Deshalb bietet sich in diesen Fällen eher eine Umwandlung der Gläubigerforderungen in Zwangswandelanleihen an, also ein 'Bail-in' unter korrespondierender Erhöhung des potenziellen Grundkapitals. Davon auszunehmen sind selbstverständlich die Giro- und Sparguthaben, deren Inhaber zwar rein formal auch Gläubiger der Banken sind, die aber ihre Bankkonten zur Abwicklung des normalen Zahlungverkehrs und zur Geldvermögensbildung nutzen.

Im September 2012 haben die Staats- und Regierungchefs der Euro-Zone beschlossen, dass der mit Beiträgen der Euro-Länder finanzierte europäische Rettungsfonds (European Stability Mechanism, ESM) auch direkt Hilfszahlungen an notleidende Banken leisten kann. Das verstößt eindeutig gegen den Grundsatz, dass zur Sanierung gewerblicher Einheiten keine öffentlichen Gelder, sondern nur Finanzmittel aus dem privatwirtschaftlichen Bereich heranzuziehen sind. Um zukünftig zu gewährleisten, dass in Krisenzeiten für Sanierungsmaßnahmen der Banken keine Steuermittel zweckentfremdet werden, ist auf der Grundlage eines europäischen Gesetzes[15] ein bankeneigener Restrukturierungsfonds zu schaffen, der nur bei Erfüllung verbindlicher Auflagen finanzielle Unterstützung gewährt. Der Teufelskreis, der durch die enge Verknüpfung zwischen Verschuldung des Finanzsektors und der Staaten entstanden ist, muss endlich durchbrochen werden. In diesem Sinne darf dieser Fonds nur durch Abgaben des Bankengewerbes finanziert werden. In einen solchen Rettungsfonds kann auch ein Abwicklungsfonds integriert werden, der die gegebenenfalls noch offenen Rechnungsposten von zahlungsunfähig gewordenen Banken trägt. Die Verwaltung ist einer von der Europäischen Zentralbank unabhängigen europäischen Anstalt für Finanzmarktstabilisierung zu übertragen.

Um mögliche Verluste vorsorglich abfedern zu können, ist für eine ausreichende Eigenkapitalausstattung zu sorgen. Das war 1988 Gegenstand der Beratungen des Baseler Ausschusses. Die gefassten Beschlüsse (Basel I) berücksichtigen bei der Bemessung des erforderlichen Haftungskapitals allerdings nur unzureichend die verschieden hohen Risiken der einzelnen Aktiva sowie Liquiditätsaspekte. Mit Basel II und Basel III sollen diese Lücken geschlossen werden. Nach Basel II müssen die Risikoaktiva unterschiedlich hoch mit Eigenkapital unterlegt werden (zum Beispiel die ausgegebenen Kredite je nach Bonität der Schuldner).[16] Basel III geht noch weiter, indem zusätzlich zwei Kennzahlen für die Liquiditätsvorsorge eingeführt

[15] nach dem Vorbild des deutschen Bankenrestrukturierungsgesetzes aus dem Jahr 2010. In Anbetracht der gegenwärtig noch außerordentlich unterschiedlichen finanziellen Schwierigkeiten in den einzelnen Euro-Ländern sollten – das wäre zu erwägen – in der Übergangszeit bis zur Überwindung der europaweiten Finanzkrise anstelle eines länderübergreifenden Bankenfonds zunächst nationale Restrukturierungsfonds eingerichtet werden, die dann später in einen einheitlichen europäischen Fonds zu überführen wären.

[16] Die Beratungen über die neue EU-Eigenkapitalrichtlinie (CRD IV) und die dazugehörige Verordnung (CRR) sind noch immer nicht zu einem befriedigenden Ende geführt worden.

werden: die sogenannte Liquidity Coverage Ratio (LCR, 'Liquiditätspuffer') und die Net Stable Funding Ratio (NSFR). Nach beiden Kennzahlen müssen die Banken neben dem haftenden Eigenkapital außerdem noch ausreichend hohe Liquidität vorhalten, um in Stresssituationen ihren Zahlungsverpflichtungen nachkommen zu können. Konkret bedeutet das: Bei den Banken muss der Liquiditätsbestand (hochliquide Aktiva plus sichere Refinanzierungsmöglichkeiten) höher sein als die benötigte Liquidität (zu erwartende Liquiditätsabflüsse plus benötigte stabile Refinanzierung).

Der Grundgedanke dieser Vorgaben ist richtig. Im Hinblick auf ihre möglichen Folgen sind jedoch noch weiterführende Überlegungen notwendig. Es ist zu befürchten, dass diese Kennzahlen die Banken dazu veranlassen, zukünftig eher kurzfristige Kredite zu vergeben oder verfügbare Liquidität zum Erwerb sicherer Wertpapiere zu verwenden, als langfristige Kredite zu gewähren. In der Tendenz führte das dann dazu, dass die Unternehmungen – besonders in Krisenzeiten – größere Schwierigkeiten hätten, ihre längerfristigen Investitionen zu finanzieren. — Dieser Effekt könnte durch die modernen Bilanzierungsregeln prozyklisch noch verstärkt werden, wenn die Banken ihre Aktiva nach aktuellen Marktwerten bilanzieren, weil dann in Zeiten der Hochkonjunktur die Eigenkapitalbasis steigt und in Krisenzeiten sinkt. Ob und wann diese zusammenhängenden Probleme durch den bei der Europäischen Zentralbank angesiedelten Europäischen Ausschuss für Systemrisiken (European Systemic Risk Board, ESRB) gelöst werden kann, ist fraglich. Bisher ist in dieser Richtung noch nichts geschehen.

Andererseits wäre zu überlegen, ob – dem Beispiel Großbritanniens[17] folgend – der Europäischen Zentralbank das Recht eingeräumt werden sollte, bei drohender Überhitzung der Kreditmärkte ad hoc generell höhere Kapitalpuffer zu fordern. Zumindest sollte das bei sich abzeichnender Immobilienblase für die Immobilienkredite verordnet werden können.

Der Hochfrequenzhandel[18] kann – wie die Vergangenheit gezeigt hat – an den Wertpapiermärkten außerordentlich destabilisierende Wirkungen haben. Die moderne Datenverarbeitung macht es möglich. Mit rechnergestützten Algorithmen können Händler fremden Orders in Mikrosekunden zuvorkommen und durch Kombinationen von gleichgerichteten und unmittelbar anschließenden entgegengesetzten Kauf- und Verkaufplatzierungen Gewinne[19] erzielen. In vielen Fällen geht es den Agierenden lediglich darum, die Reaktionen der Wertpapiermärkte zu testen. Durch irreführende Signale dieser Art kann es zu exzessiven Kursentwicklungen und Vernichtungen von Finanzwerten in

[17] durch das Financial Policy Committee (FPC) der Bank of England.
[18] Vgl. hierzu: Lattemann, CH. (und andere), High Frequency Trading – Costs and Benefits in Securities Trading and its Necessity of Regulations, in: Business & Information Systems Engineering, Vol. 4, 2012, 2. Ausgabe, Seiten 93 – 108.
[19] die im Einzelfall zwar außerordentlich gering sind, in ihrer Gesamtheit sich jedoch zu exorbitant hohen Beträgen aufsummieren.

mehrstelligen Milliardenhöhen[20] kommen, ohne dass dies den tatsächlichen realwirtschaftlichen Entwicklungen entspricht.

Um zukünftig solche perversen Handelspraktiken zu stoppen, muss – wozu auch der Wirtschaftsausschuss des Europäischen Parlaments rät – für Börsenaufträge eine Mindesthaltedauer[21] vorgegeben werden. Diese ist durch Computerprogramme streng zu überwachen. Bis es in der Europäischen Union zu einer solchen allgemein verbindlichen Regelung kommt, müssen Zwischenlösungen gefunden werden. Vor allem müssen die Wertpapierhändler und Fondsgesellschaften, welche an den Finanzmärkten unter Einsatz von Computern automatisierten Handel betreiben wollen, dazu verpflichtet werden, zuvor eine besondere Genehmigung zu beantragen, damit ihre Aktivitäten[22] streng kontrolliert werden können. Für verursachte Störungen des Handelssystems müssen sie die Haftung übernehmen und für übermäßige Nutzung besondere Gebühren zahlen. Irreführende, nicht auf konkrete Geschäftsabschlüsse gerichtete Aufträge sind mit drastischen Geldstrafen zu ahnden. Ergänzend dazu sollten die Geschäftsführungen der Handelsplätze dazu verpflichtet werden, bei ungewöhnlichen Kursentwicklungen einen sofortigen Handelsstopp zu verfügen und die Ursachen aufzuklären. Darüber hinaus bedarf es einer ständigen Überwachung des Verhältnisses zwischen Orders und Transaktionen (order-to-trade-ratio), um Regelverstöße aufdecken und Fehlentwicklungen rechtzeitig verhindern zu können.

Die im Bankensektor gezahlten Vorstands- und Aufsichtsratvergütungen, Gehälter an leitende Angestellte in den oberen Führungsebenen sowie Boni haben heute oft Ausmaße angenommen, die der breiten Öffentlichkeit kaum noch zu vermitteln sind. Sie gefährden den inneren Zusammenhalt der Gesellschaft. Bei der Formulierung von Vorgaben für ein vertretbares Vergütungssystem müssen Grundgehälter und Boni im Gesamtzusammenhang gesehen werden. Würde man nur die Boni reglementieren, bestände weiterhin die Möglichkeit, die Festgehälter so zu verändern, dass die gewünschten Ergebnisse resultieren. Aus diesem Grund müssen die Fixgehälter die Grundlage einer gesellschaftspolitisch vertretbaren Regelung sein.

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[20] wie am 6. Mai 2010 an den US-amerikanischen Aktienmärkten, als der Dow-Jones-Industrial-Average-Index in Minuten mehr als neun Prozent verlor, was einem Verlust von 1000 Punkten entsprach (Flash Crash). Die Ursache war eine fehlerhafte Order, die dazu führte, dass die IT-Systeme der Hochfrequenzhändler binnen Millisekunden zahllose Aufträge an die Börse abfeuerten.

[21] Der Wirtschaftsausschuss des Europäischen Parlaments plädiert für eine Order-Mindestdauer von 0,5 Sekunden. Diese ist sicherlich zu kurz.

[22] einschließlich ihrer zum Einsatz kommenden Algorithmen. Ein entsprechender Entwurf eines 'Gesetzes zur Vermeidung von Gefahren und Missbräuchen im Hochfrequenzhandel' (Hochfrequenzhandelsgesetz) wird seit 30. Juli 2012 in der Bundesrepublik Deutschland beraten. Diesem zukünftigen Gesetz sollen nach dem Entwurf auch Handelsgeschäfte unterworfen werden, die außerhalb des offenen Wertpapierhandels an den Börsen (Dark pool of liquidity) abgeschlossen werden.

Die einfachste Lösung wäre, wenn man im Steuerrecht für die Anerkennung der Fixgehälter als betriebliche Personalausgaben einen Höchstbetrag[23] festsetzte. Gleiches gälte dann uno actu für die Boni, wenn man diese auf die Grundvergütung beschränkte. Sogenannte Eintritts- und Abschiedsgelder dürften überhaupt nicht steuerrechtlich als Betriebsausgaben anerkannt werden. Damit würde verhindert, dass die Steuerzahler überzogene Gehälter durch entsprechend geringere steuerpflichtige Gewinne der Banken und Steuereinnahmen des Staates gewissermaßen 'subventionieren'. Diese Regelungen verstießen nicht gegen das freiheitliche Prinzip der Marktwirtschaft. Es bliebe weiterhin jedem Beschlussgremium überlassen, die vorgegebenen Grenzwerte zu überschreiten, wenn es darum geht, im internationalen Wettbewerb hoch qualifizierte Führungspersönlichkeiten zu gewinnen. Für die Banken hätte das dann die Konsequenz, dass die über die Höchstbeträge hinaus gewährten Vergütungen aus den Gewinnen nach Steuern zu zahlen wären.

Eine solche steuerrechtliche Vorgehensweise kann allerdings aus verfahrensrechtlichen Gründen nicht auf den Bankensektor beschränkt werden. Sie müsste für die gesamte gewerbliche Wirtschaft gelten. Das setzt allerdings eine EU-weite Vereinheitlichung der Steuergesetzgebung, also praktisch eine Fiskalunion voraus. Bis die Gemeinschaft so weit ist und die einzelnen Mitgliedstaaten auf ihre nationale Steuerhoheit zugunsten einer europäischen Steuerbehörde verzichten, ist noch ein weiter Weg zurückzulegen. Bis dahin müssen für sozial vertretbare Vergütungstrukturen im Bankensektor Zwischenlösungen gefunden werden.

Deshalb ist vorerst für die Grundgehälter eine Obergrenze festzusetzen, wobei dieser Höchstbetrag in besonderen Fällen in einem bestimmten, sozial gerade noch vertretbaren Intervall überschritten werden kann. Wie weit dieses Intervall maximal sein darf, muss ebenfalls gesetzlich geregelt werden. Eine Entscheidung darüber kann in Anbetracht des erfahrungsgemäß lethargischen Abstimmungverhaltens der in den Hauptversammlungen vertretenen Anteileigner – insbesondere wenn ausländische Aktionäre mehrheitlich die Eigentumsrechte besitzen – nicht diesen Gremien überlassen werden.

Für hervorragende Leistungen können im Einzelfall zusätzlich Boni gewährt werden, und zwar maximal bis zur Höhe des Grundgehaltes. Diese variablen Bezüge dürfen dann aber aus Gründen der vorsorglichen Haftung nicht ausgezahlt, sondern müssen in Form von 'Bail-in-Bonds' vergütet werden. Die Verzinsung dieser Papiere sollte fairerweise zwei bis drei Prozentpunkte über der Verzinsung vergleichbarer, nachrangiger Anleihen liegen, also über jener sogenannter 'Contingent-Convertible-Bonds' (kurz: CoCo-Bonds). Die Zahlungen an Vorstands- und Aufsichtsratmitglieder sowie alle Spitzenverdiener in den Führungsebenen müssen generell offengelegt werden. Durch die Offenlegung der Gehaltsbezüge kann ein mäßigender Einfluss bewirkt werden.

[23] Wobei allerdings die Schwierigkeit bestände, dass man diese Größe ständig der wirtschaftlichen Entwicklung – vor allem der Preisentwicklung – anpassen müsste.

Die einzelnen Vorgaben zur Regulierung der Finanzmärkte müssen von einer übergeordneten Instanz überwacht werden. Nur eine starke zentrale Aufsicht kann die Finanzmärkte disziplinieren. Überließe man die Oberaufsicht nationalen Bankenaufsehern, wäre zu befürchten, dass diese die heimischen Institute weniger streng kontrollierten.

Das Europaparlament hat beschlossen, dass die Europäische Zentralbank (EZB) ab 2014 diese Aufgabe vorerst übernehmen soll. Wichtig ist dabei vor allem, dass sowohl institutionell als auch personell eine deutliche Trennung von Geldpolitik und Aufsicht gewährleistet ist, damit keine Interessenkonflikte entstehen. Das gilt vor allem im Hinblick auf das vorrangige Ziel der Preisniveaustabilität. Außerdem muss zwischen der EZB und den nationalen Aufsehern eine klare Aufgabenverteilung bestehen, die aber eine enge Zusammenarbeit ermöglicht. Das ist deshalb von Bedeutung, weil die nationalen Zentralbanken den unmittelbaren Kontakt zu den Banken vor Ort haben und folglich die landesspezifischen Strukturen sowie die Besonderheiten der Geschäftsmodelle und Finanzgeschäfte am besten kennen. Diese Kenntnisse ermöglichen bessere Vergleiche der praktizierten Strategien. Ungeachtet dessen muss die europäische Bankenaufsicht in Kooperation mit den nationalen Aufsehern direkte Durchgriffsrechte auf insolvente Banken in Krisenländern haben, um deren nachhaltige Rekapitalisierung voranzutreiben.

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REGULATION OF FINANCIAL MARKETS

Introductory ideas about the current problems

It has become increasingly clear particularly in this century that through the destructive impacts of financial markets, economic crises are often amplified to proportions which set the entire system at risk. V. Cerra and S.C. Saxena[1] have shown that failures in real economy brought about by instability and failures in the financial sector have an extremely destructive impact, particularly in the developed industrial countries. Therefore the effectiveness of the economic systems of the Western world has been regarded increasingly questionable in public discussions and implementation of comprehensive reforms is demanded, particularly in the banking sector. Intervention with social and economic policies becomes necessary. The issue of who has the decisive say in the economy and in the society as a whole is often raised – democratically legitimised representatives of the general public or the managers sitting in the boards and councils of banks who seek profits in financial markets with extremely speculative self-interested transactions? Comprehensive regulation of financial markets has become absolutely necessary more than ever since the first signs of the beginning of the financial crisis in 2007, in order to prevent conflicts between self-interests of banks and the common good.

The essence of the demands that have stood out in discussions has been to separate speculative investment banking (above all trading on own account[2] and lending to hedge funds) clearly from classical lending and depositing activities in the so-called universal banks, i.e. banks with a wide range of business activities (ring-fencing). That way it would be possible to stop setting at risk client-based business activities in banks which are faced with bankruptcy due to their risky investment transactions. According to the current experience, such banks are eventually rescued (bailed out) with state funds because of their importance for the economy[3]. Taxpayers eventually bear the burden[4]. The state becomes a victim of extortion. The function of banks as service providers to real economy should be restored in order to avoid such a situation in the future. This assumes the creation of a system which would keep commercial banks separate from investment banks.

The Volcker rule[5] from the U.S.A. is the most radical of these proposals. According to the proposal, banks should not be allowed at all to participate in hedge funds and

[1] Cerra, V./Saxena, S. C., Growth Dynamics: The Myth of Economic Recovery, IMF Working Paper, 07.08.2005.

[2] „Casino within a bank“ like the German *Handelsblatt* calls trading on own account on its front page on 30 January 2013 as it may not take into account the interests of responsible clients.

[3] These banks are referred to as being „essential for the system“ („too big to fail“).

[4] German social democrats refer to it as „capitalism dominated by financial markets“.

[5] It has been named after Paul Volcker, the Chairman of the Board of Governors of the Federal Reserve System in 1979–1987, currently a senator.

private equity funds, to own or finance them, or to trade on their own account[6] at their own risk[7]. The Liikanen Report[8], on the other hand, is favoured more in the European Union. It is dreaded that due to the strict conditions of the Volcker rule the prohibited transactions may be performed in the form of „shadow banking". Therefore the Liikanen Group recommends to major banks[9] to keep their traditional transactions of private and business clients separate from their risky operations performed at their own risk in financial markets[10,11]. Holding companies created according to the OECD model are meant here, with subsidiaries which are legally and financially independent organisations with their own banking licenses and each responsible for one business area. An investment bank which becomes insolvent due to its risky transactions could be liquidated independently of its client-based business area. Credit and deposit transactions and therefore also the funds of bank clients would be protected. Because only such original banking transactions are related to real economy. Such keeping apart would make it possible to connect the risk closely with liability related to only profit-oriented activities in separate business units.

It is quite understandable that such conceptions on keeping activities separate were not approved by the banking communities. Counterarguments are not very convincing, however. Expenses related to organisational structure should not increase much as the main part of the basic business expenses – such as electronic data processing – can be used by all subsidiaries also in the future. However, the business units that would be engaged in investment banking would not be able to rely on the ratings of the customer service units and that would surely increase their

[6] Trading in securities, currencies, precious metals and different kinds of derivatives on own account.

[7] According to this, the activities of banks should be limited to orders received from clients, and banks themselves should not perform risky transactions with only speculative self-interested motives. (Hilger, H. A., Aktueller Begriff: der Glass-Steagall Act und die Bankenregulierung (Nr.05/10): Wissenschaftlicher Dienst des Deutschen Bundestages, 10.10.2012).

[8] Report of the Liikanen Group, an EU Expert Group for the regulation of major credit institutions: [http://ec.europa.eu/internel_market/bank/docs/high-level_expert_group/report_de.pdf]; the report is named after Erkki Liikanen, the chairman of this group, who is the Governor of the Central Bank of Finland and therefore a member of the European Central Bank Governing Council.

[9] The term „major bank" in the Liikanen Report is related to the proportion of trading on own account in the total assets of the bank (starting from 15%) and/or the absolute amount of trading on own account (starting from 100 billion euros). The Liikanen Report recommends to restrict the obligation to keep the two business areas apart and to apply it only to „major banks". Such a restriction cannot be explained by any practical reasons and therefore we may assume the interests of the banking lobby here.

[10] This does not include transactions ordered by business clients in financial markets, such as risk guarantees for actual, serious valid contracts to insure against fluctuations of prices of raw materials and currency exchange rates. The same applies to credit default swaps and certainly also to issuing of corporate shares. (Cf here also: Eesti majanduspoliitilised väitlused, 2-2012, footnote 17).

[11] That would make it possible to control (as expected) the trading on own account.

refinancing costs. The issue of whether introduction of a system that would keep commercial and investment banks apart would set at risk the reputation of participating EU countries as host countries for financial institutions would still concern only separately performed investment transactions. For client-based bank transactions, closeness to real economy is a practical necessity.

Keeping traditional business transactions separate from risky and complex investment transactions is the most important measure for controlling financial markets. This, however, assumes that not only „major banks" but all banks would be obliged to keep these two fundamentally different areas separate. A bank which is too small from the aspects of business economy to implement such a separation, should avoid performing such risky transactions.

If it is guaranteed that subsidiaries of a group have no access to the main bank when trading on their own account and that credit institutions oriented only to clients do not engage in investment banking activities and are not allowed to refinance them, the issue of whether trading on own account should be generally restricted or even prohibited is of secondary importance. Purely speculative instruments (forwards) should be prohibited in any case. Such transactions with derivates are risky for the system and partly immoral and have no relation to real economy. Such transactions are based on expectations that prices of commodities, such as agricultural products or raw materials, will change in the future, and are objects of speculation. In the past, such interventions of banks in the functioning of the economy have lead to price excesses. These in their turn set at risk the regular supply of the population with food products – particularly in the poorest regions of the world – and manufacturing sectors with intermediate products.

The remaining bank transactions that should be kept separate consist in speculative trading on own account for the purpose of quoting currency exchange rates, securities and other rights. These too are performed on own account and at own risk and are therefore not client-based. Such trading is performed – similar to the current forward transactions – not on stock exchanges but outside controlled markets, in the form of over-the-counter contracts. As such transactions are mostly not sufficiently secured with equity, unsuccessful speculations may easily lead to the insolvency of the performer of the transaction and start a chain reaction due to interdependencies in national economy. Therefore it is so important to allow performance of the transactions described above in principle only with the permission of a higher level authority[12] and under the control of such an authority.

According to the requirements of the European Parliament, banks should be obliged – and this concerns internationally operating major banks of the Western world – to present in their balance sheet the profits earned from operations in different

[12] Analogously with the Dodd-Frank Act in the U.S.A., the European Market Infrastructure Regulation (EMIR) provides that OTC derivatives will have to be secured, in principle, and agreed on between central counterparties (CCP) and registered in a central register of transactions.

countries and the taxes paid on these profits. Such disclosure would make it considerably more difficult to take their business to tax oases and would help to fight with aggressive tax manipulations.

The principle that economic subjects who perform risky transactions when seeking high profits and bonuses should bear also full responsibility for them should be established and remain in effect in market economy. Risk, responsibility and consequently also liability are inseparable concepts. The situation where banks may be sure of state aid, i.e. eventually assistance of taxpayers, due to their importance for the system should not exist. This will make it tempting to take excessive risks (moral hazard), which makes the whole system more vulnerable and more prone to crises. Losses should not be socialised while keeping the privatisation of profits and outrageously high salaries and bonuses of managers. The losses that cannot be set off in some other way have to be born by the responsible management and owners of banks. This specifically means the following: in the case of insolvency, responsible managers should repay to the company at least partly their salaries earned during a certain period (e.g. from the last five to ten years) to cover the loss, and shareholders should give up their shares[13] in exchange for claims or creditors (debt-equity-swaps, bail-in).

The approach to the payment of bonuses which were originally paid for particularly good achievements should be different. As success or failure becomes evident only several years later, bonuses should not be paid out in cash immediately. Bonuses would be first paid out in the form of bonds – to a certain extent, as surety bonds. These bonds can be cashed after a term of five to ten years, provided that the bank has not become insolvent during that period[14]. The collective liability of bonus recipients could have also an additional effect – each of them would be more aware of possible problems and would take into account the risks related to their activities and would also observe more critically the activities of their colleagues. Such a rule would consequently have a disciplinary effect.

If the debts of a bank exceed its equity in some cases – including debt-equity-swaps – also creditors could be involved in bearing losses through reducing or giving up their claims. That would considerably increase the refinancing costs of the banks which are in difficulties anyway already. Therefore in such cases it would be more right to choose the solution of converting the claims of creditors into obligatory bonds, i.e. to apply the method of surety bonds with potential corresponding increasing of the equity.

In September 2012, Heads of State or Government of the euro area decided to use the European Stability Mechanism (ESM), financed by the countries of the euro

[13] And also bank managers their shares and stock options received earlier as performance bonuses.

[14] Also disbursement of bonuses could be contingent on that – following the example of Union de Banques Suisses (UBS) – to avoid the decrease of equity quota below a certain limit (in the above-mentioned case below 7%).

area, directly for making aid payments to banks in trouble. This clearly violates the principle that no public funds but only private funds should be used for rescuing business units. In order to prevent the misuse of tax funds for rescuing banks in future crisis situations, a restructuring fund owned by banks should be created on the basis of European law[15] for the provision of financial assistance only if all mandatory conditions have been fulfilled. The vicious circle which has appeared due to the close interconnections of the financial sector with national debt has to be broken once and for all. In that sense, the above-mentioned fund can only be financed with funds from the banking sector itself. Also a liquidation fund can be integrated in that rescue fund to cover unsecured losses of insolvent banks, if necessary. Administration should be assigned to an European financial stabilisation institution independent of the European Central Bank.

In order to guarantee alleviation of potential losses already in advance, existence of sufficient equity should be ensured. This was the subject of the Basel Commission already in 1988. However, in the decisions adopted (Basel I), varying risks of certain assets and liquidity aspects were insufficiently taken into account for the determination the capital requirements. Subsequent decision packages of Basel II and Basel III will have to fill these gaps. Basel II provides creation of equity backings of different sizes for risky assets (such as credits issued according to the solvency/rating of the debtor)[16]. Basel III goes even further, introducing two more precautionary indicators of liquidity: the liquidity coverage ratio (LCR) and net stable funding ratio (NSFR). According to both indicators, banks have to retain sufficiently high liquidity in addition to the mandatory equity. This specifically means that the liquidity level of banks (high-liquidity assets and assured refinancing opportunities) should be higher than necessary (for expected liquidity outflows and the necessary stable refinancing).

The basic idea of these preconditions is correct. But looking at their possible consequences the matter should be considered more thoroughly. The indicators described will probably induce banks to issue short-term loans or to use liquid resources for buying reliable securities instead of issuing long-term loans. It would lead to a situation where businesses – particularly during periods of crisis – would have more difficulties in financing their long-term loans. The new balance sheet rules can procyclically strengthen this effect even more. Because if banks present their assets in the balance sheet according to actual market values, it increases the equity at the times of active market but reduces it during crisis. It is very questionable whether and when the European Systemic Risk Board (ESRB)

[15] According to the model of the German Bank Restructuring Act of 2010. Bearing in mind the currently still extraordinarily varying financial difficulties in different countries of the euro area, establishment of national restructuring funds could be considered instead of a joint fund for banks of the Member States during the transition period until overcoming the European financial crisis. They could later be combined into a common European fund.

[16] Discussions of the new EU Capital Requirements Directive (CRD IV) and the related Regulation (CRR) have still not achieved satisfactory results.

established at the European Central Bank can solve these interconnected problems. Nothing has happened until now in that respect.

According to the current experience, high frequency trading[17] in security markets may have an extremely destabilising effect. Up-to-date data processing technology makes it possible for brokers to execute orders microseconds before other orders with the help of computer-generated algorithms, to combine transactions in the same direction with immediately following transactions in the opposite direction and earn profits that way[18]. In many cases the aim of such actors is just to test the reaction of the security market. Such mixed signals may, however, lead to excessive variations of rates and destroy financial values to the extent of many billions[19] without reflecting actual developments in real economy.

In order to prevent such perverse trading practices in the future, a minimum resting time of stock exchange orders has to be established[20], which is also a recommendation of the Economic and Monetary Affairs Committee of the European Parliament. The resting times should be strictly monitored with computer software. Intermediate solutions have to be found until such regulation mandatory for all is reached in the European Union. Brokers and investment funds who want to perform computer-generated automatic transactions in financial markets should first of all apply for a separate licence to make it possible to monitor strictly their activities[21]. Considerable fines should be imposed on misleading orders placed without the intention of performing actual transactions.

The management of trading institutions and stock exchanges should have the additional obligation to stop trading immediately in the case of extraordinary developments of rates and to identify the causes. Besides – the order-to-trade-ratio should be constantly monitored to detect violations of rules and stop wrong developments in time.

The fees paid to board and council members, salaries of top management and also bonuses paid in the banking sector have grown to such amounts by now that it is difficult to justify them to the general public. Such development sets social cohesion

[17] Cf here: Lattemann, CH. (*et al*), High Frequency Trading – Costs and Benefits in Securities Trading and its Necessity of Regulations, in: Business & Information Systems Engineering, Vol. 4, 2012, Issue 2, pp. 93 – 108.

[18] Which may be very small in single cases but may add up to large total amounts.

[19] For instance, in U.S. stock markets on 6 May 2010 when the Dow Jones Industrial Average Index lost more than 9% within minutes, which was equivalent to a loss of 1000 points (Flash Crash). It was caused by a wrong order which led to numerous orders sent to the stock exchange from IT systems of high frequency brokers in milliseconds.

[20] The Economic and Monetary Affairs Committee of the European Parliament prefers the minimum resting time of 0.5 seconds for orders. This is surely too short.

[21] Including the algorithms they are using. The respective draft act (Act for the Prevention of Risks and the Abuse of High Frequency Trading – High-Frequency Trading Act) has been discussed in Germany since 30 July 2012. The intention is to subject also transactions performed outside public trading in stock markets (dark pool of liquidity) to this future Act.

at risk. In the formulation of a transparent remuneration system the bonuses have to be related to basic salary rates. If only bonuses were regulated, basic salaries could still be changed in the future to achieve the desired result. Therefore fixed basic salary rates should serve as a basis for the socio-politically justified and transparent regulation.

The easiest solution would be to establish fixed maximum salary rates in financial law[22] that can be recorded as legitimate personnel expenses. The same would then apply to also *uno actu* bonuses if they are limited to the basic salary rate. That way subventioning of the excessive salaries of bankers by taxpayers could be stopped as the taxable profits of banks and therefore also tax revenues of the state are low. Such regulations would not violate the principle of free market economy. Also in the future, the committee with decision-making power in every company could consider whether they should exceed the establish limits if they need to hire highly qualified people to executive posts in the conditions of international competition. For banks such rules would mean that salaries which exceed maximum rates would have to be paid from after-tax profits.

The tax law approach described cannot apply only to the banking sector, considering the basic rights. It has to cover all business enterprises. This, however, would assume harmonisation of the European Union tax legislation, i.e., in essence, the creation of a fiscal union. But there is still a long way to go before EU achieves that and each Member State gives up its own national tax system for the benefit of a common European tax authority. Until then we will have to find an intermediate solution for the creation of socially justified and transparent remuneration systems.

Therefore the maximum salary rate should be fixed first, allowing to pay also higher salaries in exceptional cases and on the basis of definite socially still justified scales. Achievement of outstanding results gives the right to receive bonuses which cannot exceed the basic salary rate. Such a varying form of payment shall not be disbursed immediately, considering precautions for the liability for risks, but should be issued in the form of surety bonds. It would only be fair to set the interest rate of such securities two to three percentage points higher than the interest rate of similar ordinary loans, i.e. higher than that of contingent convertible bonds (CoCo Bonds). All payments to board and council members, also to all high-salaried executives should be disclosed. Disclosure of salary rates may contribute to achievement of moderation.

Fulfilment of the requirements for the regulation of financial markets have to be monitored by higher-level authorities. Financial markets can only be disciplined with strong central supervision. If supervision is assigned to national banking inspectors, they may be insufficiently strict in inspecting domestic banks.

[22] The fact that the rate should be constantly adjusted to economic development, above all the development of prices, may cause difficulties.

The Heads of State or Government of the euro area decided that the European Central Bank should take this task. It is important above all to keep monetary policy and supervision firmly apart both institutionally and on the level of staff to avoid any conflicts of interest. This applies above all bearing in mind the stability of the price level. It is also important to keep a clear division of tasks between performers of supervision on the part of the European Central Bank and on the part of each Member State and to continue close cooperation nevertheless. Cooperation is important also because national central banks have direct contacts with banks and are therefore most familiar with domestic systems and also specific features of local business models and financial transactions. This knowledge makes it easier to compare the strategies implemented. The European banking supervision should, however, have the right to intervene in cooperation with national supervisory authorities in the activities of insolvent banks of countries which are in crisis, in order to encourage their sustainable recapitalisation.

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ASSET PRICE BUBBLES IN THE PERSPECTIVE OF NEW KEYNESIAN THEORY

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Abstract

Developments in the real world depends on human reaction to economic events which is also determined by dominating economic thought. Dominance of neoliberal and monetarist thinking was the main cause of ignoring asset price bubbles and their effects on real economy. New keynesian economic thinking provides an alternative. Hyman Minsky's model of financial instability was more effectively able to explain super-bubbles in US economy and subsequent ‚Great Recession'. Ignorance of momentum-bias of traders and banks contributed to this crises. Emerging markets and Baltic countries were strongly influenced by credit oversupply in US. Instabilities were so sizeable that IMF approved using capital control and proposal for tax on financial transactions was made. Policymakers and individuals should abandon ignorance of speculative asset price bubbles and improve their analytical skills to recognize bubbles and change their behaviour.

Keywords: Baltic economies, prices, business fluctuations and cycles, expectations, speculation, information and market efficiency, asset pricing theory, behavioral finance, asset price bubbles, portfolio theory

JEL Classification: D84, E3, G14

Introduction

Monetary policy and economic policy in general depends on dominating trends of economic thinking. Often this dominance of certain ways of thinking are determined by previous experiences in real economy. „The Great Recession" and preceding bubbles in housing and stock prices have damaged belief in neoclassical assumption of rationality of individuals and belief that the market mechanism provides always the fairiest equilibrium price. As many thinkers believe that allowing asset price bubbles was a mistake, then other ways of economic thinking may be worth to consider. One of the most famous of these is new keynesianism. In this writing differences between monetarism and New Keynesianism will be analysed with focus on asset price and real exchange rate bubbles in Eastern European economies. The goal of the article is to show that economic experience of economic boom and crises of 2006-2009 may be successfully explained by exploiting alternative New Keynesian framework of economic thinking. It can also explain short-term dynamics of real exchange rate or prie level. The task will be to compare monetarism's and New Keynesian economic's abilities and usefulness in forecasting and avoiding

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economic crisises. In addition to providing crystal clear theories on paper, economics should be able to forecast and recognize asset price bubbles in real world and influence economic policies to improve welfare in long run.

Reader of this article may ask why is real exchange rate topic important when focus is on asset price bubbles and monetary policy. The answer is that extreme volatility of macroeconomic variables of the Baltic economies was directly related to variables which were inherent to asset price bubble. Variability of variables of real economy was a result of variability of financial variables like price behaviour of housing, interest rates, credit standards and stock prices. Demand shock in Baltic economies raised rapidly real exchange rate or relative price level and this same thing required later downward adjustment which was quiet painful for the economy. The question is, whether different assumptions of economic thinking and different economic policy would have saved Baltic countries economies from extreme volatility.

The argument that not being supply-side economist is not supported by popular political guideline is not related to economic reality which exists on its own. 3 x 3 = 9 regardless of political party in charge at least in free society.

In the beginning part of the writing basics of neoliberal/monetarist and new keynesian will be presented and their assumptions on market efficiency. The second part focuses on New Keynesian and Behavioural Finance explanations and solutions of such crisises as these are related and similar. The third part explains asset price bubbles of US and emerging markets. The fourth part provides synthesis and proposals from learning of the past decades of financial markets and macroeconomic volatility.

1. Assumptions of Neoliberal/Monetarist and New Keynesian thinking

Neoliberalism was created by Austrian economists Friedrich Hayek and Ludwig von Mises to balance socialism and facism in 1930-s. Finally these liberal ideas were applied to real world by Margaret Thatcher and Ronald Reagan in 1980-s. During liberalization of 1980-s policymakers forgot market's speculative and overshooting nature. This belief grew out despite of success that US Federal Reserve chairman Paul Volcker, who was a conservative keynesian, achieved in early 1980-s crushing attempts of resource and and any other price bubbles with aggressive raising of interest rates. By now this tenure as Fed's chairman is remembered as a period of prosperity although fruits of this policy were later contributed to monetarists and neoliberals. Crisis of 2007-2012 increased support to postkeynesianism again.

Monetarists believe that unstable and erratic monetary policy is responsible for economic fluctuations. Keynesians believed that fiscal policy was more important tool to influence aggregate demand and dynamics of economy.

The concept of new keynesian theory was introduced by Michael Parking in 1982. Later this phrase was used by Ball, Mankiw and Romer in 1988 (Romer *et al.* 1988). The word ‚new' is used in order not to be confused with neoclassical synthesis

keynesian economics and to be related to new classical economics. The focus was on showing microeconomic reasons of price and wage stickiness. The most famous authors of the field were Stanley Fischer, Edmund Phelps and John Taylor.

The real exchange rate concept is related to PPP. Economists have held debate of PPP already almost for a century. PPP concept was introduced by Gustav Cassel in 1922. Monetarists support the idea that purchasing power parity (PPP) does hold all the time and changing the amount of money on the market does not change real economic variables – only nominal prices will be changed. Therefore the concept of real exchange rate is not very important for monetarists as monetary policy can not change real exchange rate or relative price level. If PPP holds all the time then real exchange rate is not important for them.

Keynesians see that PPP does not hold and there may be prolonging misalignments from PPP. Therefore real exchange rate emerges as an important concept and tool for analysis. In case PPP holds, real exchange rates should be persistent. It is commonly tested with standard unit root tests. In 2007 Lee and Yoon found after employing Hamilton-type Markov regime switching models on more than 100 years of data on five time serieses that the strength of PPP was changing over time (Lee *et al.* 2007). It was found out that the PPP held locally and in current regime but not in general.

Keynesians point to frictions in real economy which prevent goods prices from equalizing in short period of time. Here emerges another important concept related to real exchange rate and new keynesianism which is price rigidity. For example labour price or wage rigidity may prevent Eastern European countries to catch-up western neighbours in the EU. In case of rigid good prices wages are likely to be rigid too as the level of costs is determined by the level of goods prices. New classical economic thinking states that prices are not sticky because of rational expectations theory. Although keynesians tend to ignore the role of rational expectations and support adaptive expectations, new keynesians generally agree that households and enterprises have rational expectations but plentiful market failures result in sticky nominal prices of goods and wages.

The new keynesians provided reasons for price stickiness (Melmiès 2012, p. 453):
1) menu costs, 2) implicit contracts, 3) nominal contracts, 4) coordination failure, 5) cost-based pricing, 6) constant marginal cost, 7) non-price competition, 8) pricing threshold and 9) link between quality and price.

The most important of them were implicit contract, nominal contract, coordination failure and cost-based pricing factors (Melmiès 2012, p. 453; Blinder 1998). New keynesians believe that flexible prices would lead the economy into the state of full employment. Post keynesians see still too many market failures to achieve that. Therefore price rigidity is not the main reason for demand's effect on output for them. Wage rigidity is also cause of cuts in workers payroll and higher employment because companies are not easily able to lower wages. In new classical thinking the

firms are price takers and choose productions levels. In keynesian framework sticky prices allow them to set prices and accept quantities as given.

New keynesian's reliance on plentiful market failures also supports the ideas of behavioural finance and markets inefficiency. In general rational expectations assumption should support belief in efficient market hypothesis on financial markets.

New keynesians answer to new classical critique on keynesianism pointed to extreme informational assumptions of new classical approach (Cunningham):
1) unconstrained rational expectations hypothesis implies unrealistically sophisticated agents;
2) bounded rationality and
3) structural impediments.

Other microeconomic reasons of price and wage stickiness are:
1) technology of transactions;
2) heterogeneity of goods and factor inputs;
3) imperfect competition;
4) imperfect information and
5) imperfect capital markets.

Those new keynesians who support flexible price version of thinking state that natural economic forces magnify small shocks and stickiness of wages and prices would even soften the shocks. Therefore the focus of these new keynesians belongs to mechanics of the shocks.

New keynesians point to imperfections of the capital markets. For example equity financing is not available sometimes for firms because of cyclicality of the markets. Equity would allow firms to share business risk with equity holders. If equity-financing is not available, then firms can not share risk and will be more risk-averse (Cunningham, p. 21). During recession risk of production increases and firms are ready to accept much less risk. The aggregate supply curve will be influenced in a magnified way.

2. New Keynesian and Behavioural Finance approach to market efficiency and asset price bubbles

Keynesian economists Joseph Stiglitz and James Galbraith pointed to free market believers or Chicago school's approach's failure which led economy to the crises of 2007-2010 (Lippert 2008).

The author's of behavioural finance like Richard Thaler have shown strongly irrational behaviour of individuals on financial markets. The best example of that is the statement of Prospect theory, according to which investors behave differently depending on whether they face a loss or a gain of the same size. They are more afraid of the losing than excited from winning the same amount of money. For this

reason extremely large negative utility of financial loss causes investors to abandon stocks or other assets after initial losses without attention to price level. As a result markets tend to overshoot on the downside. On the other hand positive feedback effect, herding, overconfidence and availability bias contribute to overshooting on the upside. As a result there is more momentum on the market than in case of rational investors would be.

Previously monetarist assumption was that noise traders should be unprofitable and disappear from the market and any systematic irrationality should be temporary. During emergence of the asset price bubble these traders actually get richer and amplify overshooting and misalignment from disequilibrium. Although finally they will wiped out in large part. By this time reasonable investors on the market will be extinct breed. The idea that financial systems itself caused development of the asset bubble and subsequent collaps and external factors were not necessary was supported by legendary investor George Soros (Soros 2011). This approach is opposite to new classical and monetarist approach according to which prices on markets should always converge to equilibrium.

The new keynesian and behavioural finance approach to nature of free market is similar in a sense that they both focus on imperfections and bounded rationality of human behaviour. Raines and Leathers found in 2011 (Raines *et al.* 2011) that behavioural finance supports keynesian approach to explain bubbles and crises.

The basic roots of keynesian assumption of price stickiness may be found in behavioural finance and prospect theory. The central model of behavioural finance is prospect theory of Kahneman and Tversky (Kahneman *et al.* 1979). According to prospect theory, individuals in their decision-making are very much concerned about reference points. Outcomes are judged relative to reference points. The importance of reference points in prospect theory suggests that it may provide a microeconomic foundation for Keynes' theory of sticky wages. Prospect theory also introduced concept of loss aversion which also explains several market imperfections.

Downward rigidity of wages was shown by Bhaskar (Bhaskar 1990) to be explained by the prospect theory. His explanation assumed that individuals are loss averse. Without it wages would not be rigid.

Another famous behavioural finance author Hyman Minsky focused his efforts to understanding and explaining financial criseses. Minsky opposed deregulation policies of 1980-s and accumulation of large debt burdens. It is important to notice here that keynesian author resists debt accumulation differently from accusations of neoliberals. Minsky was considered as post-keynesian. Minsky was influenced by Joseph Schumpeter and Wassily Leontief (Wikipedia: Hyman Minsky). Similarly to George Soros Hyman Minsky stated that capitalism is inherently unstable (Minsky 1986, p. 349).

Macroeconomic models of Minsky related business cycles with endogenous investment bubbles on financial markets. During good times cash flows of firms

grow larger than necessary to repay existing loans. Speculative euphoria ensues and soon borrowers debt burden exceeds the level waht they are able to service from current incomes. The financial crises emerges. During the financial crises banks and other lenders tighten their credit standards and even worthwile borrowers will be cut from bank loans. The next stage is loss of GDP. The moment of Minsky is slow motion from stable state to vulnerable state in economy which is followed by crises.

Based on economic data of 1960-1970-s Minsky showed how financial markets may move to exaggerations and influence real economy. Minsky stressed importance of Federal Reserve Bank system as lender of last resort (Uchitelle 1996).

Credit System model of Minsky was influenced by John Stuart Mill, Alfred Marshall, Knut Wicksell and Irving Fischer (Kindleberger *et al.*, 2005, p. 14).

Minsky wrote in 1974 that the economy moves between states of strength and vulnerability and these moves are important in determining business cycles. Minsky did not agree with mainstream economists and stated that booms and busts are unavoidable in free market economy unless government or central bank interferes.

Minsky developed his theories about borrowing and economic activity on seminars with managers of Bank of America. His theories have had little impact on mainstream economics and central bank policies because he did not construct complicated mathematical models. Later postkeynesian Steve Keen created models of endogenous economic crises based on Minsky's theories. Theories of Minsky focus on dangers of speculative bubbles of asset prices. After crises of 2008-2009 some central bankers have mentioned including Minsky factor into her policy of central bank (Yellen 2009).

Minsky's financial instability hypothesis (Minsky 1992) states that the main power forcing economy into the crisis is debt accumulation in private sector. This theory came well into recognition on late 2000-s. Three different types of borrowers were distinguished. These are: 1) hedge borrower, 2) speculative borrower and Ponzi borrower. Hedge borrower is able to pay back the principal and interest fom current cash flow from investment. Speculative borrower is able to pay interest but must refinance the principal. Ponzi borrower makes bet on increase of asset value and is not able to pay interest or principal from current cash flow from investment. Ponzi borrower survives only until prices continue to go up. At the last stage of borrowing bubble Ponzi borrowing is more prevalent and may result in failure of the financial system. In the next stage speculative borrower will not be able to refinance debt. Collaps of Ponzi and speculative borrowers damages reach even hedge borrowers for their healthy businesses as credit standards will be raised to extremely high level.

Paul McCulley from PIMCO, which is one the largest fixed-income assets managers in the world, applied Minsky's financial instability hypothesis to mortgage crises of 2008-2009 (McCulley, 2009). He found out that lenders financed and focused on Ponzi-borrowers on hope that house prices continue to grow forever. McCulley argued that progress through all three Minsky's borrowing stage was obvious.

Culmination of the bubble was achieved in august 2007. Demand for houses fuelled growth of banking system which financed movement towards speculative and Ponzi-borrowing. Mortgage loans developed and bigger and bigger leverage was made available for the borrowers. Improving credit-availability pushed housing bubble further. After collaps of the housing bubble process of deleveraging was started in reverse direction. Firms decreased financial leverage, credit standards were raised and average borrower was again hedge borrower.

McCulley stated that human behaviour is procyclical by nature. Because of this capitalistic systems periodically experience periods of too high inflation and debt deflation. These processes are self-inforcing meaning that inflation creates more inflation and debt-deflation creates more debt-deflation. Humans are by nature momentum-traders and not value investors. Business cycle tops and bottoms are amplified. Ensuing recommendation of this thinking is that policymakers and regulators should employ countercyclical policies. For example higher required reserve ratios for banks could be higher during inflation periods and lower during deflation periods. Raising and lowering of key interest rates of banks is already existing tool for central banks although they appear to be too dovish to use this.

Another economist providing keynesian insight into the previous crisis is Steve Keen.

3. Asset price bubbles of US and emerging markets

In recent years the US economy experienced the largest contraction of employment and decrease in house prices in about 80 years. Influences of resulting downfall of consumption lowered global demand and slowed down world GDP growth rate. So-called ‚Big Recession' was preceded by one of the biggest bubble in housing and private borrowing in economic history. In US asset price bubbles became the problem since about 1996 when stock prices skyrocketed and this was justified by internet boom and dot-com bubble which was nine years after appointment of Alan Greenspan. Not fighting the asset price bubble was his monetarist decision. The size of the bubble and its emergence is visible on Figure 1 where historical P/E ratio of S&P 500 index is presented. In calculation earnings are adjusted for business cycle by the source Robert Shiller. The bubble exploded in 2000. Before that P/E ratio achieved was the highest in US history.

Figure 1. US S&P 500 index P/E ratio. Source: Stock Market Data Used in "Irrational Exuberance" Princeton University Press, 2000, 2005, updated until 01/31/2013.

After big disappointment in stocks US housing prices took off of the ground. This may be best described by house price development in San Diego which is depicted on Figure 2. The Figure 2 shows that the real estate bubble in US started seriously in 2002. This was the year when Federal Reserve skipped raising interest rates and ignored asset price bubble.

US monetary policy was the most potent to fight asset price bubbles during the governing period of Fed chairman Paul Volcker, who was a democrat, keynesian and not a monetarist as his successor Greenspan. Volcker was able to fight inflation and asset price bubbles at the same time in late 1970-s and early 1980-s. Asset price bubbles and crashes were generally avoided during his reign on developed markets. Stock market sell-off of late 1987 after his tenure was more related to spread of market trading algorithms than extreme overvaluation. This is visible on Figure 3.

Alan Greenspan's view on monetary policy did not foresee any action against speculative asset bubbles. Bubbles were presumably rational and any intervention to free economy was considered as unnecessary. This was a neoclassical assumption. Individuals in the economy were assumed to be informed and coldly rational. Focus was instead on cleaning up consequences of possible bubbles. There was choice to lean or to clean.

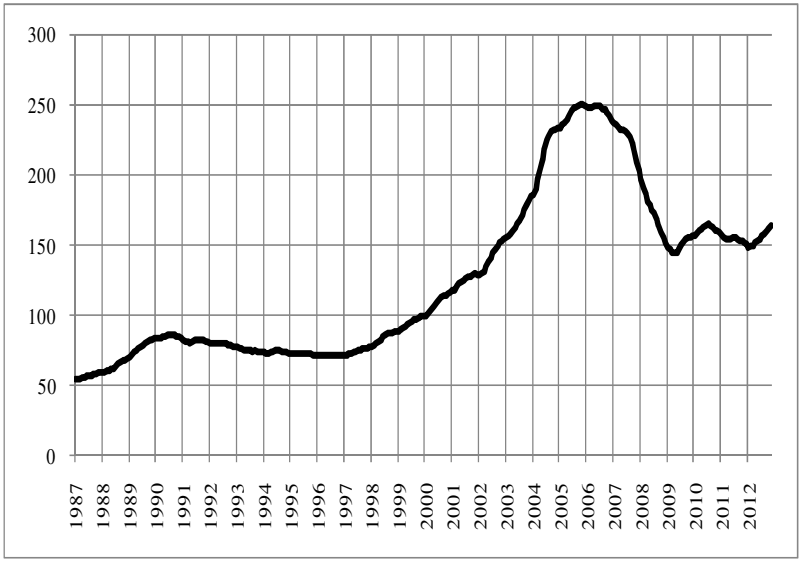


Figure 2. S&P/Case-Shiller Home Price Index - San Diego. Source: Data360.org.

Figure 3. US Fed Funds rate. Source: Federal Reserve Bank of St. Louis.

The most probable reason of experiencing successive financial bubbles in US was that monetary policy of US Federal Reserve was too expansionary. The Fed seemed to avoid raising interest rates even when asset price bubbles were emerging.

This may be also a result of dependence on politics who want to avoid tough movements by Fed. Even job market situation in terms of unemployment rate (4.5%) was not demanding low interest rates anymore in 2006. Relative indicators of US housing market showed that house prices were more expensive than ever before. Therefore higher interest rates than ever before would have been warranted. The possible and stated goal was to maintain republican president and let him to be re-elected. On the other hand Wall Street bankers were satisfied with record profits. Republican president was still lost immediately in 1998 when Fed was not anymore able to stop collapse of all-time biggest asset price bubble. Exploiting contractionary monetary policy would put pressure on asset price growth and reduce consumption through wealth effect. Every obedient and consensual Fed member of the board would agree with politician that spreading welfare today is important. The following Figure 3 depicts history of US Fed Funds rate. It is likely that US economy required higher interest rates in 2004-2006 to curb growth of house price bubble.

Extremely generous conditions on US credit market and highs prices of local assets forced US domestic investors to look for opportunities for higher returns on their capital outside of US. Speculation with stocks heated up on emerging markets. For example in China and Russia. Development of prices on Russian stock market are depicted on Figure 4. The stock market bubble was more pronounced in China.

Figure 4. RTS index, logarithmed (LN). Source: RTS Exchange.

Speculative bubbles of stocks and houses emerged also in the Baltic states. Strong demand for any kind of assets on these markets drove higher also other types of prices like wages and consumer prices. Rapid appreciation of relative price level or real exchange rate ensued. This was not caused by actual improvement of productivity of Baltic workers but oversupply of credit in US. Investor's mistakes of behavioural finance described in part 2 of the writing were present on stock market and even more on properties market. If there was a bubble in financial variables in Baltic states like stock prices, house prices and risk margins, it would be reasonable to think that this effect spread further to consumer prices and wages. These real economic variables determined real exchange rate or relative price level which also included effect of speculative bubble. This would explain rapid and unjustified rise of real wage of 2007 and subsequent forced cuts of wages and employment in 2009. The weirdest thing is to note that during the boom time mainstream politicians and economists approved high expectations for future and supported excessive risk-taking. Was it so impossible to recognize speculative bubble and take on active measures to prepare for hard landing? Most likely reason of ignorance was relying on neoliberal monetarist assumptions according to which policymakers and individuals should not worry about speculative bubbles because they are unrecognizable anyway and worry when the consequences of explosion of the bubble is here. Neoliberal thinking supported focusing on short-term profits and forgetting whether we are in a speculative bubble or not. Instead of countercyclical rhetorics politicians tried to exceed each other with more optimistic and generous future forecasts of wage and income rises. Those who dared to oppose these viewes were almost accused of high treason. Stock traders tend to be most vulnerable to those sins they are not aware of. Baltic countries also lacked a lesson of being too greedy, neoliberal and short-sighted. By now this may be one reason why support for Estonian right-wing coalition is decreasing.

Another contributing factor of the Baltic economic boom and bust cycle was probably giving up own monetary policy. European Central Bank's policies would never perfectly satisfy needs of extremely small, open, immature and emerging country in euro zone.

It is hard to believe that science of economics in 21-st century is so helpless that is unable to even provide scientific warning of such large instabilities and take on active measures to avoid collapse. At some point consequences of economic bust may become so painful that economic system will be restructured and changed so that current system of capitalism will be destroyed regardless of being it good or bad. This is exactly of what George Soros warned almost decades ago in his book „The Crisis of Global Capitalism: Open Society Endangered."

The first signs of system destruction may be visible. On a global level it is visible in attempt to impose tax financial transactions which would have clearly negative effect on free markets.

Regarding emerging markets calls for capital controls are strengthening. In April 2011 Bank of England's executive director Andrew Haldane said that emerging markets are likely to be increasingly vulnerable to asset price bubbles. The main reason for this is increasing capital inflow from advanced economies and domestic saving. He said that international support for capital control was increasing (Milliken 2011). IMF also approved use of capital control for developing countries in early 2010 because research showed convincingly its usefulness (IMF 2010).

4. Synthesis and proposals after decades of market and economic volatilities

It seems reasonable to claim that financial markets strongly influence real economy and its business cycles and the real exchange rate is a concept that lies in central part of this chain of influence in the middle of price system. Due to this extremely volatile and cyclical financial markets create extremely volatile real economy and business cycles. In 1990-s newkeynesian and later head of Israelian central bank Stanley Fischer stated that macroeconomic stability is the preconditon for prosperity (Fischer 1993, p. 23). Any kind of uncertainty is an unwanted phenomenon and results in higher level of unemployment and larger GDP gap on average. Asset price bubbles also misallocate resources and cause real exchange rate misalignment. Decreasing confidence in economy causes cancellation of many potentially benefitial transactions.

At some point the range of business cycle becomes extremely large. The largest house price bubble through history in US and subsequent ‚The Great Recession' in US and other countries demonstrated that volatility is increasing in both directions. If this process continues, at some point volatility may become too large to bear. Resulting loss of confidence in economy may bring cancelling of many useful business projects and significantly lower long-term economic growth rate. The last boom and bust cycle was already among the most extreme in world economic history. Occurrence of selloffs on Wall Street and historical realized volatilities are presented in Appendix 1 and Appendix 2 at the end of the writing.

Despite allowing economic freedom to create economic bubbles and crashes in previous decade, in the final stage US and other governments had to intervene extremely actively in stopping downward spiral created by collapsing financial and banking system. This extremely active intervention is illustrated by growth of central banks balance sheets due to quantitative easing and large fiscal deficits. Finally this will probably destroy confidence in currency, monetary policy and concept of welfare state. It is hard to imagine even larger intervention to economy by the government in free markets framework. The ensuing question is, whether ex-ante intervention during emergence of the asset price bubbles would have been less costly in the end? Necessary interventions were in the scope of traditional monetary and fiscal policies without giving up on fiscal balances and purchasing power of currency. Confidence against insitutions would have been maintained.

Milton Friedman wrote in his famous book ‚Capitalism and Freedom' in 1962 that although economic freedom is necessary part of general freedom, it is also

prerequisite of political freedom (Friedman, 1962). Central control of economy was accompanied by political repression. In free market economy, transactions have voluntary nature. According to liberal thinking the government should not say how much investments is proper and when it is too much because noone knows. Despite that speed limit is present in traffic. Driving too fast is harmful to driver himself and other drivers. Having speed limit in US does not make US dictatorship or communist country. If economists are able to recognize exaggerations on the financial markets, then analogously ,speed limits' may be introduced to avoid asset price bubbles. There are already such speed limits in the form of banks reserve requirement and interest rate tool of monetary policy. These tools were probably not used in sufficient manner in previous decades.

Free markets provide price-discovery function in calm and rational state. But sometimes markets go crazy. Market-action is taken over by speculative traders who turn less attention on fundamentals and focus more on technical and momentum indicators. Irrational traders begin to rule the marketplace and reasonable and rational investors exit the market. At extremely high price level they see no sense to own assets and just sell them. Therefore the market will be dominated by gamblers who do not trade on random basis but rather time their trades based on each other's actions or following technical analysis trading rules. Coordination of trader behaviour occurs during times of asset price bubbles. This leverages overshooting of the markets and markets lose their price-discovery function at least temporarily.

The coordination of actions during asset price bubble was visible also in commercial banks's action in Estonia. In order to not to lose marke share, credit standards and interest rates were lowered in turns. This was comparable to traders competition for stocks or properties in deficit.

Emerging markets are especially vulnerable to asset price bubbles because asset managers of developed countries occasionally pick up stories of new hot emerging markets and pursue to earn some additional return for their portfolios on these markets. These markets are illiquid and if these markets will be out in their minds, they sell all assets on these markets regardless of price. This feature was described by famous and inarguably famous legendary trader George Soros as ,theory of reflexivity' in his book The Alchemy of Finance in 1987 (Soros 1987, p. 27-45).

Soros took over the theory of reflexivity from philosopher Karl Popper and presented acceptance of this theory as the cause of his personal success. Differently from average economist who believes that markets tend to move towards equilibrium and other moves are random noise, according to theory of reflexivity prices move away from equilibrium for prolonged period and even start to influence fundamentals themselves. Market movement away from equilibrium is a self-reinforcing process and therefore misalignment from equilibrium tends to increase. Sometimes the trend changes and new trend also reinforces itself. So emerges the boom and bust cycle according to him.

Reflexivity means circular relationship between cause and effect which is similar to positive feedback effect of behavioural finance. Market sentiment tends to self-reinforce itself. Rising prices attract new investors and falling prices scare them off. Prices continue to rise until the process becomes unsustainable. Positive feedback leads market in other direction to collapse or antibubble.

Soros also mentioned that bank's behaviour can be also explained by reflexivity similarly to traders behaviour (Soros 2008). Lending standards will be lowered during boom period and raised during the period of falling prices. Therefore behavioural finance may be applied to financial markets and banking sector in general. Single banks on the market of properties may be considered as traders on the stock market. They may be open to the same behavioural finance fallacies like overconfidence, anchoring and positive feedback effect.

The final question is, whether policymakers should allow any size of disequilibrium to emerge in the economy. Where should be the limit, who should be responsible and which tools should be applied? Here also arises question about single European monetary system. If asset price bubble occurs only in few countries and European Central Bank is not able to respond to this because other countries in euro-area suffer an antibubble or depression, then European countries have basically lost monetary policy tool. But monetary policy should be the main tool for fighting asset price bubbles. Current situation in Europe supports this concern and it was even better visible in 2010-2011 when economies in northern side of the euro area started to show signs of economic bubble and at the same time southern countries fell into deeper and deeper into crisis. The probable outcome of the situation will be that European Central Bank will be constrained to raise interest rates due to collapse of Spanish and Greece economies and Germany will experience a boom. There is need for real exchange rate or price level appreciation of Germany in relation to Spain and Greece. Boom and inflation of prices and wages in Germany would allow this to happen. In this case the euro will be rather weak. If germans are not ready to accept depreciation of the euro and high inflation in Germany, then interest rates will be raised and Spain and Greece will require more downward flexibility of wages and prices. This will be even more painful process bringing more strikes, distractions, debt problems and threats to European unity.

The countries with more liberal economic policy and more decisions in hands of market forces suffered more than economies with less economic freedom. This was visible in extraordinary large housing price bubble and ensued deep GDP loss. Less liberal countries like Slovakia and Slovenia escaped more easily.

Non-intervention to asset price bubble in Baltic states probably caused harm to long-term economic growth in the Baltic states. Relative price level or real exchange rate volatility caused shocks to Baltic economies. Economic policy in Estonia and Latvia was rather procyclical than countercyclical. Politicians enjoyed the boom and called for reaching to top-five richest countries in Europe. Pleasant and warm dreams of long prosperity overwhelmed any sober and rational consideration of reality.

Government economic policies should not push emotionally driven asset price bubbles and call for additional exaggerations.

Inability to foresee hard landing of US housing market and economy in general harmed belief in monetarism-based economic thinking. Neoclassical rational expectations theory says that current expectations for the future are correct on average. The actual outcome suggested that it was not correct at least for this time.

Some author's have called for much more active fight against asset price bubbles than before 2008 crisis was the case. For example former member of US Federal Reserve System board Frederic S. Mishkin (Mishkin 2011, p. 66) called for central banks to lean against potential credit bubbles per se when financial imbalances appear to be building up. Mishkin suggested tools to restrain excessive risk-taking in the credit markets. It is important to notice that he suggested focusing on controlling excesses of credit market and not excesses of stock market. His suggestions were also in line with keynesian economist Hyman Minsky who saw accumulation of private debt as the most dangerous warning sign. It also suggests that current proposals to impose financial transactions tax would not help avoid excesses on private debt markets and housing markets.

According to Gruen, Plumb and Stone (Gruen *et al.* 2003), from Australian central bank, in the ideal world central bank reacts to asset price boom with raising interest rate and asset price weakness with lowering interest rates. But this would require central bank to give very precise estimation to price level's possible over- or undervaluation and existence of asset price bubble. Due to this fact central banks in the real world are often not even able to provide optimal reaction to asset price bubble. In 2009 NY Fed's governor William Dudley said in Basel on BIS conference that asset price bubbles are serious threat to real economy. Dudley added that stopping growth of asset bubble should be Fed's task (Shostak, 2009). During the crises of 2008-2009 the head of Bank of England Mervyn King adopted assumption that markets are inherently unstable (Soros, 2011).

Proponents of free market state that free price-determination should not be disturbed as free market knows the best. This would precondition rational behaviour. But asset bubbles are result of herd behaviour and positive feedback effect not rational behaviour.

The philosophical question is, wheather one group of individuals who are victims of fallacies of behavioural finance should own right to spoil economic environment for everyone by exaggerating business cycle? Exaggerators of business cycle were traders and speculative investors (including banks) who reinvested profits from the last successful trade in the direction of momentum employing more leverage in order to maximize personal profits. Negative consequences for the whole society were not included in their risk/reward calculations.

The most important implication of this writing is that actions of individuals and policies of economic policymakers should take into account features of faulty

human behaviour. Current extremely expansionary monetary policy of the largest central banks of the world could easily generate new asset price bubbles. It will certainly happen in some regions of the world before the weakest regions of the world economy would get on feet. In European Union the most competitive countries may face asset price bubbles after years of stimulative monetary policy.

The main suggestion is to improve analytical competence and knowledge about human behaviour on financial markets in order to contain unnecessary volatility of financial and then real economic variables and ensure macroeconomic stability which is conducive precondition to long-term economic growth. Policy makers and individuals like private investors and banks should abandon liberal ignorance of asset price bubbles and start to behave in a more responsible way.

Conclusions

Asset price bubbles and dynamics of real exchange rate were in the light of different schools of economic thought. It appears that dominance of neoliberalism and monetarism contributed positively to emergence of extremely large financial bubbles and busts during the recent decade. Namely central banks decision to use clean-approach rather than lean-approach regarding asset price bubbles. New keynesian school's assumptions of bounded rationality and imperfect markets were more useful in explaining developments in real economic world. Especially Hyman Minsky's theories on inherent instability of capitalist economies.

This writing also uncovered that keynesianism is not about chronic deficit spending, it is about countercyclical economic policy which was missing during the period of neoliberalism domination. Critics of keynesianism accuse keynesians of supporting constant deficit-spending. Actually these are more likely short-sighted politicians who exploit keynesian arguments to support deficit-spending before elections.

Assumption of investor rationality is a nice concept on paper and in theory but unlikely to achieve in the real world. Humans are not computers, they are defective creatures as they are slaves of their mental framework which is a result of living in a prehistorical herd in African savannah. Herding and avoiding negative experiences at any cost were evolutionary useful adaptations there. In modern world these old features may be easily hindering factors.

Too large volatilities of financial variables caused also too large volatilities of real economic variables like real exchange rate which is central link in chain of financial markets influence on real economy. These volatilities played out in Baltic economies in a leveraged way because of fallacies of behavioural finance, small size of the economy and openness.

Policymakers and private investors should take into account humans faulty behaviour and bounded rationality. These errors are well described by behavioural finance. Policymakers and private investors should improve their analytical skills in recognizing speculative bubbles and changing behaviour. Abandoning ignorance of

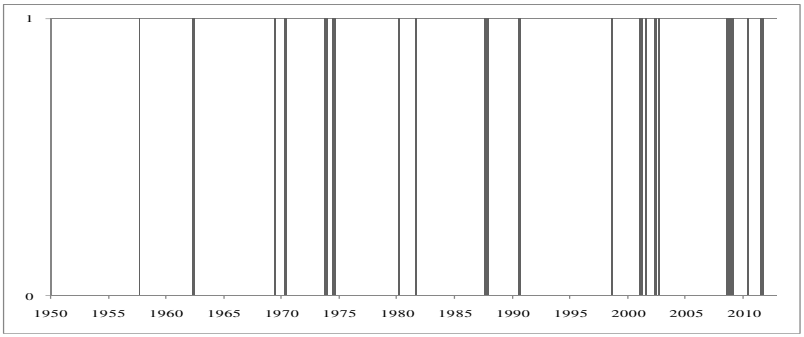
asset price bubbles is prerequisite to more stable economic environment. The government policy should be rather lean than clean afterwards type.

References

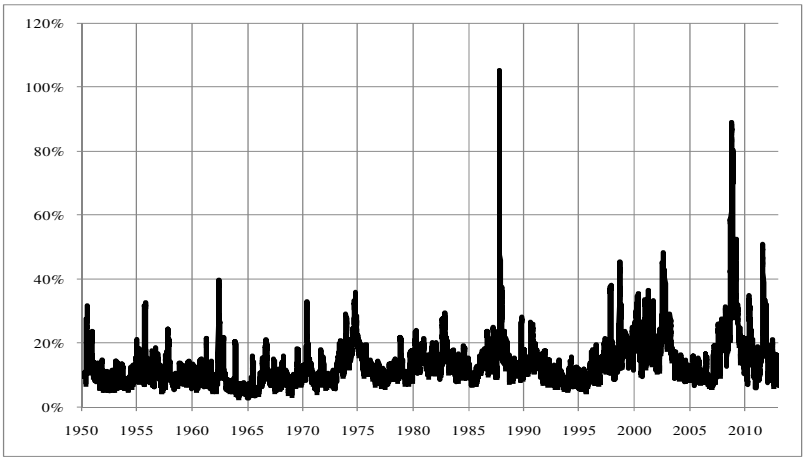
1. **Bhaskar, V. J.** Wage Relativities and the Natural Range of Unemployment, Economic Journal, volume 100, Conference supplement pages 60-66, 1990.
2. **Blinder, A. S.** et al. (eds.). 1998. Asking About Prices: A New Approach to Understanding Price Stickiness, Russell Sage Foundation, New York.
3. **Cunningham, S. R.** New Keynesian Theory. http://web.uconn.edu [http://www.powershow.com/view/16972-Y2EwN/New_Keynesian_ Theory_powerpoint_ppt_presentation].
4. Data360.org. S&P/Case-Shiller Home Price Index - San Diego. [http://www.data360.org/pub_dp_report.aspx?Data_Plot_Id=337&count=all].
5. Federal Reserve Bank of St. Louis. US Fed Funds rate. [http://research.stlouisfed.org/fred2/series/DFF/downloaddata]. 02.02.2013.
6. **Fischer, S.** The Role of Macroeconomic Factors in Growth. Journal of Monetary Economics, Vol. 32, no. 3 (1993): 485-512. [http://www.nber.org/papers/w4565].
7. **Gruen, D. Plumb, M, Stone A.** How Should Monetary Policy Respond to Asset-Price Bubbles? Research Discussion Paper 2003-11, Reserve Bank of Australia, Australian Treasury, 2003. [http://www.ecb.int/events/pdf/conferences/gruen-plumb-stone.pdf]. 02.02.2013.
8. IMF. Controls on Capital Part of the Policy Mix, Says IMF Staff. IMF Survey online. 2010. [http://www.imf.org/external/pubs/ft/survey/so/2010/POL021910A.htm].
9. **Kahneman, D., Tversky, A.** Prospect Theory: An Analysis of Decision under Risk, Econometrica, XLVII (1979), 263-291.[http://www.princeton.edu/~kahneman/docs/Publications/prospect_theory.pdf]. 03.02.2013.
10. **Kindleberger, C. P., Aliber, R.** Manias, panics, and Crashes. A history of Financial Crises. Fifth Edition. John Wiley & Sons, Inc. 2005.
11. **Lee, H.-T., Yoon, G.** Does Purchasing Power Parity Hold Sometimes? Regime Switching in Real Exchange Rates, Economics working paper / Christian-Albrechts-Universität Kiel, Department of Economics, 2007. No. 2007, 24. [http://hdl.handle.net/10419/22040]. 24.01.2013.
12. **Lippert, J.** Friedman Would Be Roiled as Chicago Disciples Rue Repudiation, Bloomberg L.P., December 23, 2008. Retrieved September 9, 2009.
13. **McCulley, P.** Global Central Bank Focus. PIMCO. May 2009. [http://media.pimco-global.com/pdfs/pdf/GCB%20Focus%20May%2009.pdf?WT.cg_n=PIMCO-US&WT.ti=GCB%20Focus%20May%2009.pdf]. 01.02.2013.
14. **Melmiès, J.** 2012. “Price Rigidity,” in J. E. King, The Elgar Companion to Post Keynesian Economics (2nd edn.). Edward Elgar, Cheltenham. 452–456.
15. **Milliken, D.** Bank's Haldane warns of emerging market asset bubbles, Reuters, 2011. [http://uk.reuters.com/article/2011/04/09/uk-boes-haldane-idUKTRE7382DK20110409].

16. **Minsky, H.** Stabilizing an Unstable Economy. McGraw-Hill Professional. 1986.
17. **Minsky, H.** The Financial Instability Hypothesis. The Jerome Levy Economics Institute of Bard College. Working Paper No. 74. 1992. [http://www.levyinstitute.org/pubs/wp74.pdf]. 28.01.2013.
18. **Mishkin, F. S.** How Should Central Banks Respond to Asset-Price Bubbles? The 'Lean' versus 'Clean' Debate After the GFC. 2011. Reserve Bank of Australia. [http://www.rba.gov.au/publications/bulletin/2011/jun/pdf/bu-0611-8.pdf].
19. **Raines, J. P., Leathers, C. G.** Behavioral finance and Post Keynesian-institutionalist theories of financial markets. Journal of Post Keynesian Economics; Summer 2011, Vol. 33 Issue 4, p. 539. June 2011.
20. **Romer, D., Ball, L., Mankiw, G.** The New Keynesian Economics and the Output-Inflation Trade-off, Brookings Papers on Economic Activity, Economic Studies Program, The Brookings Institution, vol. 19(1), pages 1-82. 1988.
21. RTS Exchange. RTS index. [http://www.rts.ru/en/index/stat/dailyhistory.html?code=RTSI]. 25.01.2013.
22. **Shiller, R.** US S&P 500 index P/E ratio. Stock Market Data Used in "Irrational Exuberance" Princeton University Press, 2000, 2005, updated until 01/31/2013. [http://www.econ.yale.edu/~shiller/data/ie_data.xls]. 15.01.2013.
23. **Shostak, F.** Ludwig von Mises Institute. Mises Daily: Thursday, August 13, 2009. [http://mises.org/daily/3626]. 25.01.2013.
24. **Soros, G.** The Alchemy of Finance: Reading the mind of the Market. 1987.
25. **Soros, G.** The New Paradigm for Financial Markets: The Credit Crisis of 2008 and What it Means. 2008.
26. **Soros, G.** My Philanthropy. The Official Website of George Soros. [http://www.georgesoros.com/articles-essays/entry/my_philanthropy].
27. **Uchitelle, L.** H. P. Minsky, 77, Economist Who Decoded Lending Trends. The New York Times. [http://www.nytimes.com/1996/10/26/us/h-p-minsky-77-economist-who-decoded-lending-trends.html?pagewanted=1]. 03.02.2013.
28. Wikipedia: Hyman Minsky. [http://en.wikipedia.org/wiki/Hyman_Minsky]. 15.01.2013.
29. **Yellen, J. L.,** A Minsky Meltdown: Lessons for Central Bankers. [http://www.frbsf.org/news/speeches/2009/0416.html]. 15.01.2013.

Appendix 1. Occurence of S&P 500 index declines of at least 15% in 50 business days.



Appendix 2. Historical realized 30-day period annualized volatility of S&P 500 index. Author's calculations.



BASIC APPROACHES TO A LOCATION THEORY OF ONE PUBLIC FIRM[1]

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Abstract

Public firms are public economic units that take location decisions or are involved in such decisions. There is a lack of location theories that consider this feature. The literature on public facility location theory mainly concerns location of real capital serving economic units. Attempts to formulate a public firm decision-making oriented location theory are offered. Typical location factors of public firms relate to the goals of public firms, their environment and the number of decision-makers involved in the location decisions. A theory of the public firm is presented, that enables to develop a theory of location for public firms. It is introduced to industrial location theory and to location criteria based on investment rules. Its application in relation to public firms achieving welfare or public objectives is also covered. Interventions by the owner lead to more than one decision-maker and to principal agent models. Public firms compete horizontally due to competition among the public owners or public firms competing against each other. The authors mention some results on location choices within the framework of our basic approach.

Keywords: location theory, public firm theory, industrial location theory, competition among public firms, principal agent, trust of public firms

JEL Classification: D61, D73, HO, H11, H42, H70, D61,D73, L32, N9, R14, R53

Introduction

Most of the interest in location theory concentrates on its relevance for the private sector. Only a few approaches to location theory for the public sector are available. There are some attempts to interpret public administrations as decision-making economic units (see Friedrich, Feng 2007) and very few applications of location theory for public firms. However, many approaches to determining optimal locations exist for **public facilities** (Tietz 1968; Massam 1993; Drezner, Hamacher 2002). They are often defined as installations and service units for firms and households. Sometimes they are located to fulfil public goals, but they are normally not treated

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as decision-making economic units. **Public firms**, however, are **decision-making units** by definition[3].

A **public firm** shows some **characteristics** of a private firm, as public firms are oriented towards sales and markets (Friedrich 1969; Rees 1976; Turvey 1971; Thiemeyer 1975; Blankart 1980; Bös 1981; Püttner 1985; Eichhorn 1991; Friedrich 1992; 1992a). On the other hand, such firms are obliged to achieve public goals, which are fixed by the public owner, a regulatory agency or the law, or which are determined within the decision-making organs of the public enterprise.

The reasons for the **lack of public firm location theory** are twofold. The first is the lack of a location theory for public firms, and the second is that a suitable theory of the public firm that could be used to develop a specified theory of location for public firms is also missing. In this article we look to improve this situation by elaborating location theories for public firms and by referring to a theory of the public firm.

Therefore, we tackle the following **questions**:

- Which are the special location factors of public firms?
- How should we consider them in a theory of public firm?
- How can we apply and adapt traditional location theory to a public firm?
- What statements on the location of a public firm can be evolved?

In the second **section** we refer to important location factors. A simple model of a theory of the public firm considering location factors is elaborated and initial statements on optimal locations are put forth in the third section. The fourth section deals with the application of traditional location theories, some applicable findings from public facilities location theory and an adaptation of public firm investment theory. Location models concerning political goals, multiple decision-makers and principle agent relations between the public owner and the public firm are dealt with in the fifth and sixth section. The seventh section is devoted to the location model of a trust of public firms. The closing and concluding section points to some necessary extensions.

[3] They belong to the group of public administrations, which are defined as economic units as follows. A **public administrative unit** at least partly in public ownership tries to achieve public goals by producing goods and services delivered to other economic units. It possesses a long-term stock of production factors and its management should be competent in regard to essential decisions concerning production and delivery. Public offices comprise legally dependent institutions fully integrated into budget planning. A **public firm** is separated from the owner's budget planning (Eichhorn, Friedrich 1976, p. 52, p. 76) decision making and managed partly autonomously. For public firms other expressions synonymously used are public enterprises or public companies. Here the public firm is defined as above and is a public decision making unit and organizational institutions. They can be federal, state or municipal firms of public or private law or public firms or belong to public corporate bodies.

I. Location Factors of Public Firms

Public firms are established, extended, resettled, contracted or closed. These changes comprise location decisions[4] categorized as follows:

(1) **Development-oriented location decisions** stem from:

- The growth of the market-oriented public sector in order to improve service provision using the clients' ability to pay to finance activities. Examples include public highway-companies, railway companies, hospitals, public banks, airports, seaports, inland waterways companies, domains and public farms, wineries, public aircraft industries, public civil engineering, public trading companies, municipal housing firms and business promotion agencies. This growth can be due to economic development, settlement of private firms, public offices, other public firms or population growth.
- The growth of trusts related establishing new public firms such as firms for new industrial plants, founding subsidiaries such as convention and fair companies etc.
- The development of new administrative functions, which lead to new public firms such as magnetic trains, new media, toll collecting companies, new companies for energy production and provision, research firms etc.
- Founding public firms in the course of regional competition such as business promotion agencies, public banks for venture capital etc.

(2) **Location decisions** in the course of **public sector restructuring** refer to:

- The establishment of a public firm because of a change in ownership;
- The establishment of mixed public firms;
- The establishment of a mixed firm within the framework of public private partnership;
- The nationalization and municipalisation of private firms, and bailing out private firms;
- Trust building for public firms, and the concentration and decentralization of public firms;
- The reallocation of public firms because of changes in management concepts;
- The reallocation following from technological changes;
- The reallocation determined by a change in a public firm's enterprise goals;
- Territorial and functional reforms leading to establishing or closing down institutions;
- Spin offs from public offices for taxation, financial, organizational or other reasons;
- The privatization of public firms that may cause movements or closing down of public firms;

[4] These decisions are mentioned in the literature on public firms cited above and in literature on public management, public finance and public choice, territorial reforms, functional reforms and public administration location.

- New co-ordination between public authorities that may lead to public mixed firms and associations;
- Changes in EU policies with respect to subsidisation and new competition policies that may lead to closing down public firms and reintegration into the public administration and government or to new public firms because of separation and regulation strategies.

(3) **Location decisions** following **political decisions** include:
- Decisions involving the transformation of an economy from people-owned (socialist) firms to public firms;
- The privatization of public firms;
- Political developments such as unification, integration of continental economies, military alliances;
- The goal of public policies such as preserving factors of production, environmental protection and development goals;
- Political goals to gain in votes, to strengthen the influence of parties over special industries and regions;
- A reallocation because of economic or military warfare.

As public firms are separated from the public owner's budget planning, they behave similar to private firms but their goals are public and they consider many specific restrictions and regulations. Therefore, location theory results for public firms differ from those for public administrations, public facilities and private firms. Public firms are established, extended, resettled, contracted or closed. They show **typical location factors** referring to:
(1) The characteristics of finance, delivery, production and procurement;
(2) The goals of the public firm;
(3) The economic, political and national environment of the public firm;
(4) The number of decision-makers.

Factor (1): Characteristics

Apart from those factors relevant for private firms, some factors are related to the **finance** of public firms such as the provision of equity capital by the public owner, grants and finance through sales under the conditions of public pricing. **Production** is often similar to production in private firms; however, it may consider special restrictions with respect to the equal treatment of customers, safety, production techniques, access capacities and the compulsory participation of clients in production. A production organization is sometimes governed by public law. The quality and other characteristics of goods are often specified in statues and laws. There are special rules for public **procurement** and auctions, and special payment schemes for the staff.

Compulsory deliveries, specified market areas and market segmentations, and delivery conditions as well as pricing rules are often specified in statues or laws. Some public firms operate according to company forms of public law. With public

firms there is extensive **vertical co-ordination** with the public owners and with other tiers of government. Within the decision-making bodies of a public firm, different governments may cooperate horizontally in the case of a public institution. As public issues are important and some public firms are large, public authorities, such as the EU, national, state and local governments, intervene through the public firm.

Therefore, different **forms of co-ordination** exist, such as governmental decrees, legal provisions, moral suasion of management, taxation, subsidisation, profit transfer and loss compensation, pricing policies, financial arrangements etc. Oligopolistic price and quality competition prevails **horizontally in competition** among private and public firms. In vertical co-ordination, bilateral monopolistic negotiations (e.g. between the firm's management and its public owner) or several stage negotiations with different tiers of government exist. Public firms are often involved in regional and political competition. On the other hand, many location factors of private firms play a role as well.

Factor (2): The Goals of Public Firms

The goals of public firms are different from those of private firms. **The aims** are related to social goals, the goals of the constitutional state organization and forms of government, economic policy, public finance and budgeting, and political goals such as vote maximization, adequate political staffing or specific political goals. **Welfare maximization** is also considered to be one of the public firm's goals. Public enterprises serve as instruments of public policy, outsourcing administrative functions, and their aims are those of the firm's management, the public owner or other public institutions. Furthermore, these goals are closely linked to the desired or undesired **effects of location** choice. Especially if the goals express preferences for the delivery of specified clients, such as goals concerning full coverage, minimum distance access, or serving clients in assisted areas.

Factor (3): The Environment of Public Firms

This includes the **spatial distribution** of resources, clients, possible locations, sector activities, party members, etc. It also involves the cultural conditions, legal system, government structure, country size, landscape structure, environmental conditions and all kinds of external effects. In addition, the traffic network or continuous planes as location conditions play a role. Furthermore, location factors vary according to the number of public firms.

Factor (4): The Number of Decision-Makers

One decision-maker exists if a **decision-making council** of a public firm has no conflict resolution or there is only one decision-maker with the owner or with the public firm. Commonly, there are several decision-makers. There are boards and councils, which include decision-makers with different aims, taking decisions. Moreover there might be the **owner** of the public firm on the one hand, and the

managers of the public firm displaying different intentions, on the other. Political decision-making bodies could be involved as well as the administrative units of the owner. Then, because of the legal role of municipalities in urban planning or states (provinces), national governments and the EU in regional planning, or because of necessary conditioned grants or grant regulations of the EU, several players may be involved in **vertical competition** influencing the location decision for the public firm. These decision-makers may be partly involved in **horizontal regional competition**. This means that other representatives of other regions, such as state or provincial governments, play a role in location decision-making. Finally, the public firm may have competitors in other regions or with respect to sales and procurement markets.

II. A model of a public firm

A simple model of a public firm serves as a basis for a **theory of public firms** and allows us to integrate many of the location factors mentioned. The following simple model of a public firm (Friedrich 1988; Friedrich 1992; Friedrich, Feng 2000) at a given location comprises:

- The **utility** (goal) function U of the public firm's management showing management utility depending on output X and labour input L.

(1) $$U = U(X,L),\ \partial U/\partial X = U_X^{'},\ \partial U/\partial L = U_L^{'}$$

- A restriction concerning the **production function**. There is one fixed factor A and two variable factors of production L labour and C materials).

(2) $$X = A \cdot f(L,C),\ \begin{matrix} \partial f/\partial L = f_L^{'} > 0 \\ \partial f_L^{'}/\partial L = f_L^{''} \le 0 \\ \partial f_C^{'}/\partial L = f_{CL}^{''} = f_{LC}^{''} = \partial f_L^{'}/\partial C > 0 \end{matrix} \quad , \quad \partial f/\partial C = f_C^{'} > 0 \quad , \quad \partial f_C^{'}/\partial C = f_C^{''} \le 0 \quad ,$$

- A **demand function** showing the dependency between the price P and volume X of sold output.

(3) $$P = P(X),\ \partial P/\partial X = P' < 0$$

- The **costs function** demonstrates fixed costs K_A and two types of variable costs. The factor price of labour is w and that of materials is i.

(4) $$K = K_A + w \cdot L + i \cdot C$$

- A restriction, which equates **turnover to costs**, is introduced. We assume self-financing of the public firm.

(5) $$P(X)\cdot X = K_A + w\cdot L + i\cdot C$$

- The maximization of the utility of management under the restrictions mentioned leads to the following LaGrange formulation:

(6) $$\Lambda = U(X,L) + \lambda\cdot(P\cdot X - K_A - w\cdot L - i\cdot C)\text{, while}$$
$$X = A\cdot f(L,C)$$

- The following **first order conditions** of maximization

(7) $$\frac{\partial\Lambda}{\partial\lambda} = P(X)\cdot X - K_A - w\cdot L - i\cdot C = 0,$$
$$\frac{\partial\Lambda}{\partial L} = U_L^{'} + U_X^{'}\cdot A\cdot f_L^{'} + \lambda\cdot[P\cdot(1-\frac{1}{\varepsilon})\cdot A\cdot f_L^{'} - w] = 0$$
$$\frac{\partial\Lambda}{\partial C} = U_X^{'}\cdot A\cdot f_C^{'} + \lambda\cdot[P\cdot(1-\frac{1}{\varepsilon})\cdot A\cdot f_C^{'} - i] = 0 \quad\text{, while}$$
$$\varepsilon = -\frac{P/X}{P'}$$

yield to **two optimality conditions**. One concerns the equivalence of the relation of marginal utilities of marginal factor inputs to the proportion of respective marginal profits, and the other condition refers to the cost coverage of turnover.

(8) $$\frac{U_L^{'} + U_X^{'}\cdot A\cdot f_L^{'}}{U_X^{'}\cdot A\cdot f_C^{'}} = \frac{w - P\cdot(1-\varepsilon^{-1})\cdot A\cdot f_L^{'}}{i - P\cdot(1-\varepsilon^{-1})\cdot A\cdot f_C^{'}}$$

(9) $$P = \frac{K_A + w\cdot L + i\cdot C}{X}$$

According to the utility functions, **different cost curves** result. An output maximizing public firm shows curves of minimal costs. If output and labour are evaluated positively, then a curve of higher costs results. If only labour has a positive weight, the cost curve is more unfavourable, and if management needs labour compensation in the case of higher production, the cost curve is even higher. In the first three cases, the resulting output is higher than with profit maximization.

The restriction may also refer to a given desired profit requiring a given difference between turnover and costs. The results do not change fundamentally. The result of the **model is shown graphically** in Figure 1.

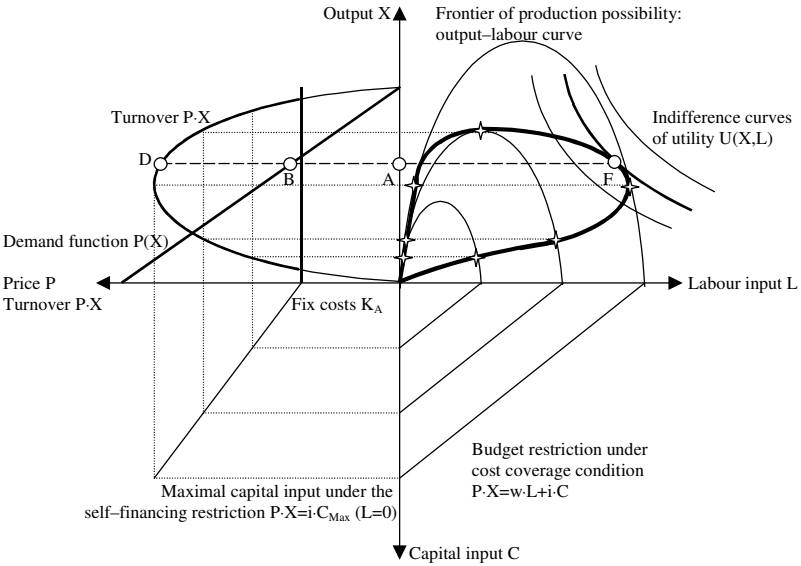

Figure 1. Theory of the public firm (Dehne, Friedrich, Nam 2009).

The second quadrant demonstrates the sales conditions of the public firm. For each volume of sale there follows turnover and the financial revenues that are used to cover the costs. After deducting fixed costs K_A, a financial amount is available to finance variable costs. The so-called output-labour curve illustrates all output-labour combinations that can be financed. However, for each sales volume, there is only one corresponding production volume X; therefore, only two points on the output-labour curve shown in the second quadrant are relevant. One production is material-intensive and the other is labour-intensive. For alternative turnovers, the corresponding production volumes result in a set of output-labour curves and a set of relevant material-intensive and labour-intensive points. Their connection leads to a potential labour-output curve indicated as a thick curve in this quadrant. By introducing a set of indifference curves that correspond to the management utility function (1), the highest indifference curve the management can achieve touches the potential output-labour curve at point F. This determines optimal production A, optimal price B and optimal turnover D. Moreover, there is a path of points of tangency between alternative potential output-labour curves, which correspond to the alternative demand curves for the public firms. These are related to the cost curves mentioned above.

If the management utility function depends on output only, the management **maximizes output** (II) and the cost minimal cost function results. Utility functions depending on **output and labour** (I) lead to paths more to the right of the cost minimal path in the right hand quadrant. If the public firm is going to **maximize**

labour input (III), then a path results which connects points of tangency near the respective maximal turnover volumes.

If the utility function (1) depends on profit and the restriction (2) is not binding and just a profit definition, then we end up with a **maximum profit** (IV) solution along the cost minimal path. In rare cases the public firm owner tries to use its public firm to raise revenues (Friedrich 1998; Friedrich, Feng 2002). The respective solution leads to a higher price and a smaller output as in former solutions. A utility function depending on **profit and labour** (V) results in a solution between the profit maximal and the labour maximal price. Output and fee solutions are illustrated in Figure 1 and Figure 2.

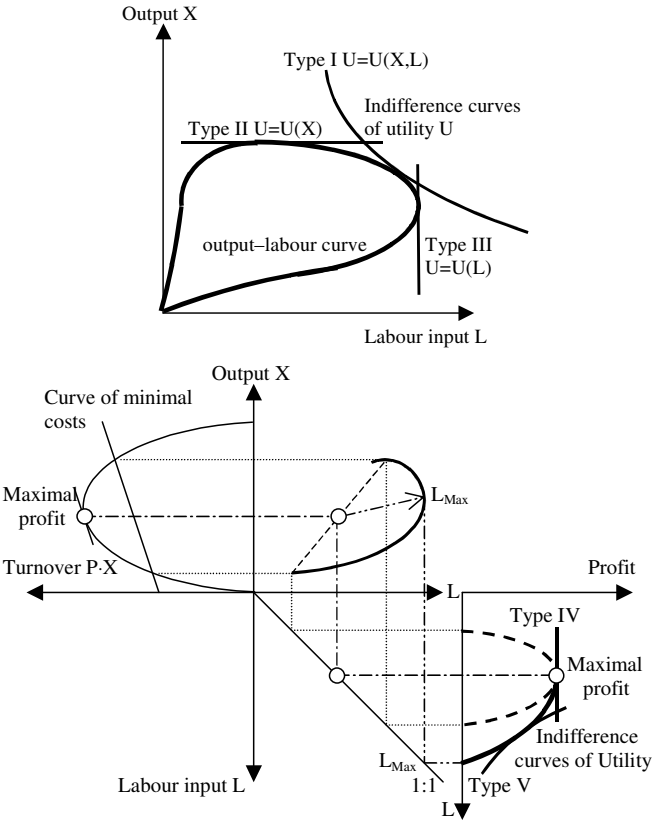

Figure 2. Solutions according to types of management (Friedrich 1998).

The model introduced above is also useful if there is another decision-maker at a higher level (e.g. the owner government), who has a utility preference (preference) function concerning the output and the financial means. In a first attempt, we

consider the owner government as a very powerful **principal**, e.g. the management of the public firm may need additional financial means from the owner, the legal form of the public firm guarantees the high competences of the owner government, the municipality's rights for urban planning, etc. So the principal is able to command the management of the public firm serving the principal as a dependent **agent**. However, it should not totally loose the cooperation of the public firm's management, for this management is needed to realize the location choice. Therefore, the public management of the firm has to receive a minimum utility to guarantee their willingness to perform.

This approach was applied to determine actions of municipal competition through municipal firms (Friedrich, Feng 2000). The utility function of the public firm is again dependent on output and labour. But now a profit F is allowed, which is transferred to the municipality. The utility function of the municipality shows the utility depending on the output of the firm and on the profit transfer. Moreover, minimum utilities are introduced for both players. For a given demand function and a production function there are combinations of pareto-optimal profit and output out, for which, a solution has to be chosen. These combinations lead to combinations of utilities, forming a utility frontier. The best solution in favour of the powerful principal is where the principal receives its maximum utility and the public firm achieves minimum utility.

However, the principal might not be as powerful for various reasons, such as the existence of dependencies of the local economy on the services and goods of the municipal firm in terms of electricity, transportation, water supply, tourism and culture and so on, or the knowledge and skills of the management of the public firm, a favourable relation of the management of the public firm to the management of a municipal savings bank or mutual political support. Then the players have to negotiate a solution including a combination of utilities and of output and profits.

III. Industrial location theory for a public firm with one decision-maker

We extend the basic model of the public firm by considering locations and applying a **Weber approach** (Launhardt 1882; Weber 1909; Palander 1935; Moses, 1958; Dredzner, Klamroth, Schöbel, Wesolowsky 2002, Mc Cann 2002; Mc. Cann, Sheppard 2003; Eiselt, Sandblom 2004) to determine the location of a newly established public firm. Points of delivery as well as deposits of factor supply are given and an ideal traffic system exists[5]. We consider location dependent and distance dependent on the cost of supply and delivery. Therefore, variable costs are influenced by the choice of location. Now we end up with three **optimality conditions.** One expresses that the proportion of the marginal utility changes caused by the factor changes must equal the change in marginal profits due to variations. The second concerns the equality of price and average costs. The third requires that marginal transportation costs must be the same in either direction. If fixed costs are location dependent as well, total marginal location-dependent costs must be the

[5] Distances are not through traffic networks but the shortest way in the Pythagorean sense.

same in either direction. It is also possible that the production function is location dependent. Then the first condition still holds; however, the third condition varies. The proportion of marginal utility in either direction caused by respective movements equals the proportion of marginal profits resulting from these movements. Other typical location factors of public firms, such as external costs, agglomeration effects and so on, can be introduced through restrictions varying the optimality conditions for location (for public administrations see Friedrich (1976, pp.150). Only in the case of output maximization are locations selected as cost minimal.

As in cost minimization in **transportation networks** (Hakami 1964; Gülicher 1965; Beckmann 1999; Marianow, Serra 2002), public firms have to be located in nodes of the network as long as the points of delivery or factor supply are in the nodes and the transportation costs are linear.

More seldom than with the location of public administrative units or with public facilities, **several locations** have to be determined simultaneously. When introducing the extension of the market area, a Lösch market area results, based on the assumption of zero profit and the cost curve determined above. This area increases with higher fixed costs as well as a population increase, and decreases with more labour-intensive costly production, as well as higher transportation costs. For this optimal sales district, approximately expressed by a hexagon, a system of public firms can be traced and their locations and number determined. The central place theories from Christaller, Lösch and other types can be applied (Christaller 1933; Lösch 1944; Bos 1965; Tinbergen 1968; Beckmann 1999; Parr 2002).

As the functions of the model introduced above normally lead to non-linear solutions, **operations research** methodologies to account for optimal locations are not so easily applied. Warehouse problems, covering[6] problems, assignment problems (Beckmann 1999; Drezner, Hamacher 2002; Marianow, Serra 2002) must be solved by non-linear programming methods or interpreted by referring to Kuhn-Tucker conditions.

Optimal locations can be found via the application of **investment rules** (Friedrich 1969), if discrete locations are available. For each location the model above can be solved. In Figure 3, different sizes of a charging public firm are shown, and the resulting cost curve and turnover curve are depicted. Because of a positive evaluation of output (output maximization or output and labour dependent utility maximization as above), the intersection of turnover and the cost curve turns out to be a solution that determines output and price. For a given management utility function the best solution is always to the right; that is, the solution that allows for the higher output. The point and the respective output where the location oriented cost curves cross is called the critical output.

[6] E.g. locating a facility to serve costumer demand for a pre-specified period.

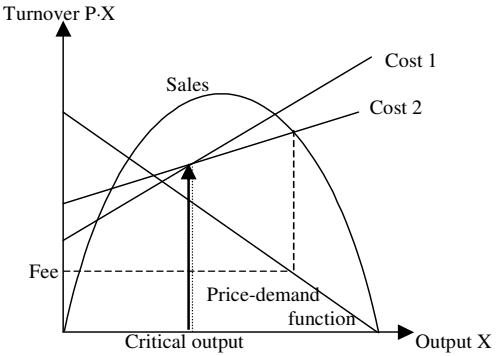

Figure 3. Fees corresponding to different sizes of public firm (Compiled by the authors).

From this we can derive the **following rules** for the optimal location of a public firm:

- if the critical output can be sold at a profit, that location is the best
- if the relevant cost curves show smaller marginal costs than at other locations (c.f. Figure 3).
- if the critical output, which is smaller than that at maximal turnover cannot be sold at a profit, the location with the lower marginal costs is the best one (c.f. figure 4, left).
- if the critical output, which is larger than that at maximal turnover cannot be sold at a profit, the location with the highest marginal costs turns out to be the best one (c.f. Figure 4, right).

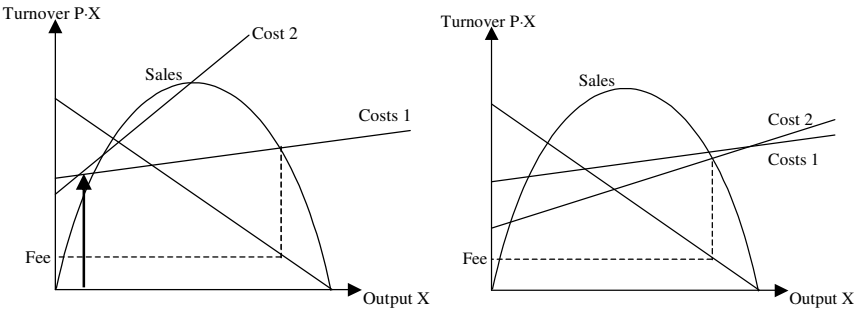

Figure 4. Different fees according to different critical outputs (Compiled by the authors).

This solution can also be applied, if an absolute profit has to be achieved. The cost curves get marked up according to the profits and the rules apply to the resulting curves.

To determine rules for selecting the best locations one can refer to models concerning the **accumulation and growth of capital** (Friedrich 1969, pp. 251; Friedrich 1976, pp. 251). Each location is interpreted as a capital stock assigned to maximize the management utility function above. Without a special restriction on the investment finance the following simple rule results. Capital should be accumulated at the locations until the marginal gain in utility through investment is as high as the marginal utility loss caused by additional payments of interests. If a special budget restriction for investments prevails in a period, the accumulation has to take place until the proportion of marginal net utility changes at two locations equal the proportion of the acquisition costs multiplied by marginal profit at the respective locations.

In the case of a principal agent relation for each location a Nash solution might result. By ordering the locations according to the utility combinations, a frontier of pareto-optimal distributions may result. Out of them a second round Nash solution might result, or the best Nash solution is determined using an additional welfare function concerning the two parties.

IV. Welfare and political goals with one decision-maker

The goal function of the decision-maker must not refer solely to the utility of the management of the public firm. The goals of publicfirms or the aim of localization are also of public interest. Therefore, economists tend to assume that the public decision-maker wants to maximize **social welfare**.

Welfare can be expressed by a welfare function, a **net-benefit formula**, a utility function as part of a utility analysis, or a vote function (e.g. majority voting). Single goal realization, such as output maximization (Friedrich 1976), employment increase, turnover or fiscal revenues maximization (Thiemeyer 1975) or the realization of fair or predetermined rates of return (within the framework of commercial rules (Shepherd 1965; Friedrich 1976; Friedrich 1978)), marginal-cost price solutions (Oort 1961; Lösenbeck 1963; Nelson 1964; Thiemeyer 1964; Thiemeyer 1970, Krelle 1976; Bös 1981), peak-load-pricing (Turvey 1971; Bätz 1979; Blankart 1980; Bös 1981; Wirl 1991) or péage solutions (Allais 1984; Hutter 1950; Boiteux 1951) might also serve the evaluation of locations. When just a few alternative locations exist, the **net- benefit of investment** at the various places has to be calculated to determine the optimum net-benefit location when realizing marginal-cost-price, peak-load-price and péage solutions. The application of commercial rules sometimes needs additional criteria to determine the optimum site. If two locations show the same desired rate of return, the profits may turn out different. Therefore, that with the higher profit or higher output might be preferable.

Components of these goal formulations may be distance dependent, distance independent and location dependent. The models mentioned above for numerous locations on a plane can be applied as well. The optimal location of a public firm, as a result, requires that distance dependent marginal social welfare, marginal net-benefit or marginal utility (in the sense of one goal or a utility analysis) be equal in

each direction. The same is true for voters. If location-dependent items like location-dependent production functions, location-dependent demand functions and location-dependent factor prices occur, the conditions for optimal production must be considered. The relationship between marginal welfare increases or marginal net-benefits, marginal vote increases and marginal goal changes caused by marginal factor inputs must equal the relationship between marginal profits.

Approaches applied in public facilities location theory (Massam 1993) to locate near clients (or voters), to minimize total average distance to clients (or voters), or minimizing the distance to the most remote client (or voter) known as Rawls solution can also be used.

V. Location theory for a public firm in the case of principal-agent-relations – more decision-makers competing vertically

The principal agent relation introduced above can also be useful in another instance. Another decision-maker exists at a higher level (e.g. the owner government) with a utility preference (preference) function concerning the location. In a first attempt we consider the owner government as very powerful **principal**.

A new utility function of the principal is introduced and the former utility function (1) of the management equals a minimum level; therefore, for some locations the management must be compensated by allowing for higher output and labour input. Because of the minimum utility guaranteed to the agent, the principal has to cope with a reduction of his potential utility with each possible location. The **best location** is where the net utility of the principal achieves its maximum. There the marginal utility of the principal **equals the marginal utility loss** of the principal caused by the requirements of the minimum utility of the agent.

Another approach that is also linked to a powerful principal was applied to determine actions of municipal competition through municipal firms (Friedrich, Feng 2000). The utility function of the public firm is again dependent on output and labour. But now profit F is allowed, which is transferred to the municipality. The utility function of the municipality shows utility depending on the output of the firm and on the profit transfer. In addition, the profit transfer demanded from the municipality is location dependent; if the management agrees to a location highly preferred by the municipality, then the city government achieves a higher utility. Moreover, minimum utilities are introduced for both players. For a fixed location and a non-location-dependent production function there are combinations of profit and output from which a solution has to be chosen. These combinations lead to combinations of utilities forming a utility frontier. A Nash solution can be determined. If there are several locations, different utility frontiers result. The minimum utilities also move. The point where the frontier touches the highest indexed Nash indifference curve yields the **optimal solution**.

However, for various reasons mentioned above the **principal** might **not be so powerful.** If both utility functions are location dependent and the municipality

prefers locations enabling higher F and the public firm locations enabling higher output, then for each location a Nash solution results and a combination of utilities and also of output and profits. However, there is a sequence of such solutions depending on the location, which again forms a utility frontier. A Nash solution can be derived from these to provide **the optimal location** of the public firm.

Normally, there are not many locations available for public firms. This could be considered according to alternative evaluation parameters in the models above. The results in such cases are not changed fundamentally.

However, in this situation the game is reduced to a **one-shot game**. This may be demonstrated through a payoff matrix. The utility mentioned could be used, and one solution would be to find a location nearest to a Nash solution.

There are other options as well if the utilities are expressed using **indicators** such as profits, output or labour. According to the characteristics of the game, **solutions** correspond to equilibrium points, absolute equilibrium points, solutions in dominant strategies, or very occasionally, in minimax strategies if the owners and the managers have to agree on a location. The strategies used might be locations on the side of the owners and the sizes of the firm as well as activity volumes according to the management of the public firm; such models are developed for location choices concerning the location of public administrative units (Friedrich 1976).

Further models may refer, on the part of the principal, to **political goals,** such as winning votes or maximizing votes. There is also a little-known model by Sam **Pelzman** (1971; 1976), which was extended by Ziemes (1992), where the principal is interested in vote maximization and the public firm in profit maximization. However, this model concerns price policies and comprises price fixing in two markets referring to different voters. In this paper, we adapt this model to the location issue. Although profit maximization is restricted for public firms (Friedrich 1969; Püttner 1985; Detig 2004), some public firms especially in the industrial sector try to achieve profit goals. We analyse one public firm that sells on monopolistic markets (Dehne, Friedrich, Nam 2009). The profit of the public firm increases with price reductions until a profit maximum is achieved and decreases if price cuts follow. This is demonstrated in Figure 5 by curves G1 and G2 referring to profit. Indifference curves that reflect price combinations are also derived. **Curve P** shows all price combinations that yield the same profit.

Voters dislike high prices from public firms. Therefore, in Figure 6, curves A1 and A2 result with respect to votes. For votes, **curve V** is delineated to show all price combinations on both markets leading to the same amount of votes.

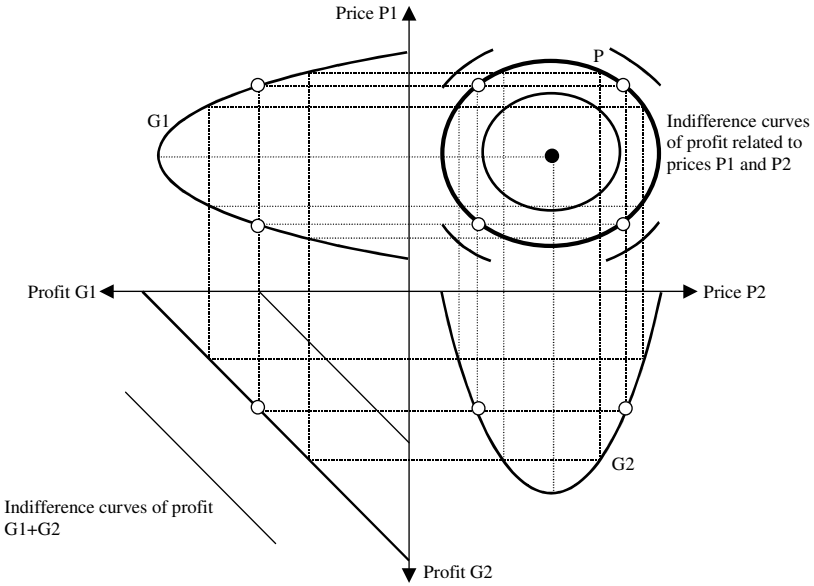

Figure 5. Profit indifference curves (Dehne, Friedrich, Nam 2009).

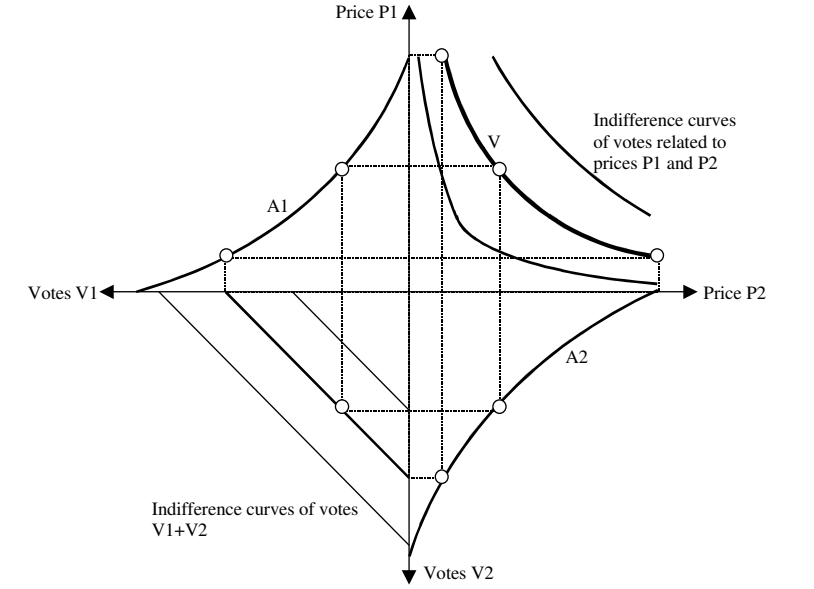

Figure 6. Indifference curves of votes (Dehne, Friedrich, Nam 2009).

Points of tangency between curves V and P in Figure 7 show the **path of the pareto-optimal combination of prices** ZM for the principal (politically interested owner) and the agent that gives maximal profit for the given votes or maximal votes for the given profit.

The respective combinations of utilities are shown in Figure 8, where the votes are depicted vertically and the profits horizontally. If a very powerful principal (owner) is assumed, he determines a low profit (eventually zero) and maximum votes at point Z. If the agent is overwhelmingly powerful, he asks for maximum profit at point M leaving the principal with the resulting votes. We can introduce a minimum profit in order to ensure the activities of the public firms or minimum votes for the principal necessary to avoid privatization, and so on. Again, a **Nash solution** can be achieved at point N. In this case the political influence of the owner leads to relatively low prices.

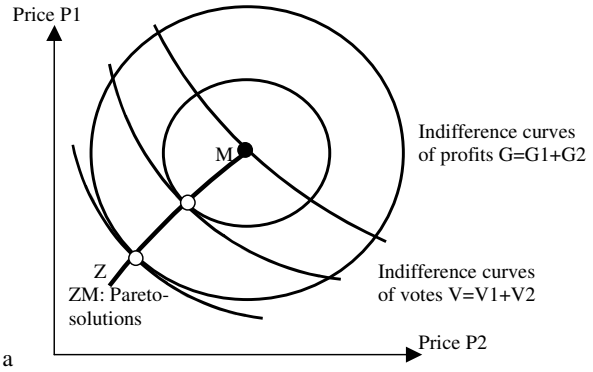

Figure 7. Pareto-optimal path of fees (Dehne, Friedrich, Nam 2009).

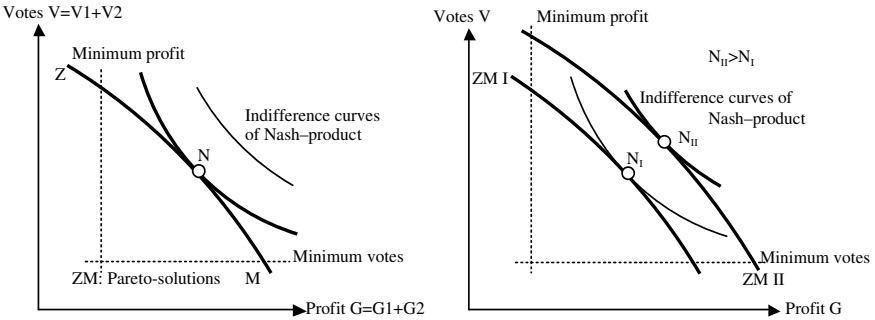

Figure 8. Nash solution for prices for one and two locations (Compiled by the authors).

This was a pricing solution, analogous to Pelzman, that may prevail at **one location**. Voting behaviour or profits may be different at other locations, then for each

subsequent location a different pricing solution results. According to different ZW curves different N points result if the minimum conditions are the same. That N point is the best when it is situated on a higher Nash indifference curve (c.f. Figure 8 point NII in the left graph). The location is best when the Nash product is the highest. To consider fixed costs, P curves can be re-indexed by deducing fixed costs. Therefore, the ZW curve is more to the left in Figure 2. Points NI and NII change; however, the statements elaborated are still valid.

We can also combine the **extended Pelzman approach with our model.** Then the G curves are utility curves for the management of the public firm (c.f. Figure 9) with a given location. Formally the solutions are the same, instead of profits the management utility is used (c.f. Figure 9). According to Figure 8, the solution with the utility curve with the highest N is chosen.

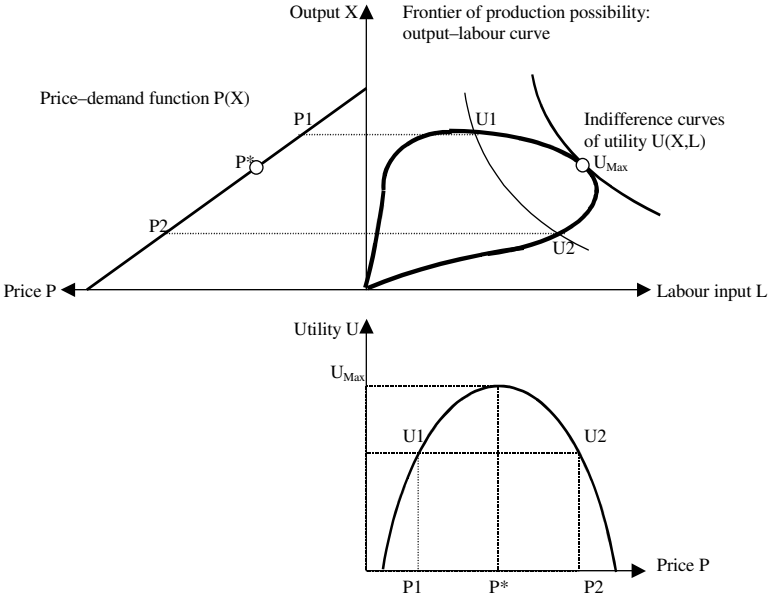

Figure 9. Utility curve of management (Compiled by the authors).

Conclusions

The discussion showed that **public firms** are public economic units that have to make many **location decisions** or are involved in such decisions. There is a lack of location theories that consider this feature. The literature on public facility location theory mainly concerns investment decisions for infrastructure projects that involve instalments and real capital serving economic units.

We categorized and identified the **location factors** of public firms. There are numerous occasions in the course of the individual development of public firms when the location decisions of public firms are linked to developments resulting from public sector restructuring and political changes. Therefore, there are many specific location factors, which get allocated to the delivery, production, procurement and financial spheres and types of coordination public firms are involved in. Typical location factors are related to the goals of public firms. As the firms are embedded in their environment and many of their goals refer to this environment – a group of location factors refer to the economic, traffic and natural environment. In recent developments, location decisions differ according to the number of decision-makers involved in the location decisions.

As location decisions are related to general decision-making in public firms, a **theory of the public firm** is necessary, and therefore presented, that enables us to develop a theory of location for public firms, which is depicted initially to cover costs, but can be also applied if the owner wants to achieve a specified profit. This public firm model is the basis for subsequent approaches to public firm location theory.

The model is introduced to **industrial location theory** and provides the conditions for the optimal location of one public firm. The relationships between the model and traditional location theories are mentioned. Location criteria based on investment rules are directly linked to the model and the resulting cost functions, albeit using locations connected to different production processes. The application of the basic model in relation to public firms achieving welfare or public objectives in the case of one decision-maker is also covered.

As the public firm is related to the public owner through organs of the public firm, such as the assembly of owners, supervisory boards and so on, essential questions, such as location choices, are also influenced by the owner. Therefore, there is **more than one decision-maker** and vertical coordination prevails. This leads to **principal agent models,** where the principal might be very powerful and the public firm as an agent can only accept or reject location proposals, or if the firm is more powerful, the public owner has to negotiate a solution with the firm's management. The model can be used for such situations as well. How the political model by Pelzman (1971, 1976) can be extended to function as a location model by applying the basic model is also indicated.

References

1. **Allais, M.** (1948), Le Problème de la Coordination des Transports et la Théorie Economique, Revue d'Economie Politique, Vol. 58, pp. 212-271
2. **Bätz, K.** (1979), Administrierte Preispolitik öffentlicher Unternehmen, Gebühren und Tarife als Mittel zur Lenkung der nachfrage nach öffentlichen Leistungen, Nomos, Baden-Baden
3. **Beckmann, M.** (1999), Lectures in Location Theory, Springer, Berlin, Heidelberg

4. **Blankart, Ch.** (1980), Ökonomie der öffentlichen Unternehmen, Vahlen, München
5. **Boiteux, M**. (1951), Le Revenue Distribuable et les Pertes Economique, Econometrica, Vol. 19, pp. 112-133
6. **Bös, D.** (1981), Economic Theory of Public Enterprise, Springer, Berlin, Heidelberg, New York
7. **Bos, H. C.** (1965), Spatial Dispersion of Economic Activity, University Press, Rotterdam
8. **Christaller, W.** (1933), Die zentralen Orte in Süddeutschland, Fischer, Jena, English : The Central Places in Southern Germany, Prentice Hall, Englewood Cliffs 1966
9. **Dehne, A., Friedrich, P., Nam, Ch.** (2009), Determination of Fees for Local Services under the Consideration of Public and Management Objectives, Zeitschrift für öffentliche und gemeinützige Unternehmen, Vol.32, pp. S. 1-18
10. **Detig, D.** (2004), Die kommunale Anstalt des öffentlichen Rechts als Wirtschaftsförderungsinstitutution, Nomos, Baden-Baden
11. **Drezner, D., Hamacher, H. W.** (Eds.) (2002), Facility Location, Applications and Theory, Springer, Heidelberg, Berlin
12. **Drezner, Z., Klamroth, K., Schöbel, A., Weselowsky, G. O.** (2002), The Weber Problem, in: D. Dezner, H.W. Hamacher (Eds.), Facility Location, Applications and Theory, Springer, Heidelberg, Berlin, pp. 373-407
13. **Eichhorn P., Friedrich P.** (1976), Verwaltungsökonomie, Nomos, Baden-Baden
14. **Eichhorn, P.** (1991), Öffentliche Betriebswirtschaftslehre, Nomos, Baden-Baden
15. **Eiselt H. A., Sandblom, C. L.** (2004), Decision Analysis, Location Models, and Scheduling Problems, Springer, Heidelberg, Berlin
16. **Friedrich, P.** (1969), Investitionskriterien für Gemeindeunternehmen, Mohr, Tübingen
17. **Friedrich, P.** (1976), Standorttheorie für öffentliche Verwaltungen, Nomos, Baden-Baden
18. **Friedrich, P.** (1992), Der vertikale Wettbewerb im Prinzipal-Agent-Verhältnis: Ein Ansatz zur Weiterentwicklung der Theorie der öffentlichen Unternehmen, in: P. Friedrich,, Beiträge zur Theorie öffentlicher Unternehmen, Zeitschrift für öffentliche und gemeinwirtschaftliche Unternehmen, Beiheft 14 , pp. 178-207
19. **Friedrich, P.** (1998), Gebührensteuerung mittels geeigneter Kostenrechnung - Ein Analyserahmen - , in: H. Brede (Ed.), Preise und Gebühren in der Entsorgungswirtschaft, Nomos, Baden-Baden, pp. 181-220
20. **Friedrich, P., X. Feng** (1998), Cluster Formation in the Framework of the Treuhand Approach: From Socialist to Market-oriented Clusters, in: Michael Steiner, Clusters and Regional Specialization, Pion, London, pp. 129-180**.**
21. **Friedrich, P., Feng, X.** (2000), The Role of Public Enterprises in Regional Competition, in: P.W.J. Batey, P. Friedrich, Regional Competition, Springer, Berlin, Heidelberg, New York, pp. 186-201
22. **Friedrich, P., Feng, X.** (2007), Ein Verwaltungsökonomisches Standortmodell, in: D. Bräuning, D. Greiling, Stand und Perspektiven der öffentlichen Betriebswirtschaftslehre II, Nomos, Berlin 2007, pp. 257-271

23. **Gülicher, H.** (1965), Einige Eigenschaften optimaler Standorte in Verkehrsnetzen, in: W. Krelle, Multiplikator, Gleichgewicht, optimale Wachstumsrate und Standort-verteilung, Schriften des Vereins für Socialpolit5ik, N.F., Vol. 42, Duncker und Humblot, Berlin, pp. 110-137
24. **Hakami, S. L.** (1964), Optimum Location of Switching Centres and the Absolute Centre and Median of a Graph, Operations Research, Vol. 12, pp. 450-459
25. **Hutter, R**. (1950), La Théorie Economique et la Gestion Commerciale des Chemins de Fer, Le Problème Tarifaire, Revue Générale des Chemins de Fer, Vol. 69, pp. 318-332
26. **Isard W., Smith, T. E., Isard P., Tung, T. H., Dacey, M.** (1986), General theory, Social, Political, Economic and Regional, MIT-Press, Cambridge Mass., London
27. **Krelle, W.** (1976), Preistheorie, II. Teil, Mohr, Tübingen
28. **Launhardt, W.** (1882), Der zweckmäßige Standort einer gewerblichen Anlage, Zeitschrift des Vereins deutscher Ingenieure, Vol. 26, pp. 106-115
29. **Lindemann, S.** (1999), Theorie und Empirie kommunalen Wirtschaftsförderungs-wettbewerbs, Nomos, Baden-Baden
30. **Lösch, A.** (1944), Die räumliche Ordnung der Wirtschaft, Fischer, Jena, English: The Economics of Location, Yale University Press, New Haven 1954
31. **Lösenbeck, H.-D.** (1963), Die Preisbildung öffentlicher Unternehmen, Duncker & Humblot, Berlin
32. **Marianow, V., Serra, D.** (2002), Location Problems in the Public Sector, in: H.W. Hamacher (Eds.), Facility Location, Applications and Theory, Springer, Heidelberg, Berlin, pp. 37-79
33. **Massam, B. H.** (1993), The Right Place: Shared Responsibility and the Location of Public Facilities, Longman, London
34. **Mc Cann, Ph.** (ED.) (2002), Industrial Location Economics, Elgar, Cheltenham
35. **Mc Cann, Ph., Sheppard, S. T.** (2003), The Rise, Fall and Rise Again of Industrial Location Theory,Regional Studies, Vol.37. pp.649-663.
36. **Moses, L.** (1958), Location and the Theory of Production, Quarterly Journal of Economics, Vol. 78, pp. 259-272
37. **Mühlenkamp, H.** (1994), Öffentliche Unternehmen, Vahlen, München, Wien
38. **Nelson, J. R.** (Ed.) (1964), Marginal Cost Pricing in Practice, N. J., Prentice Hall, Englewood Cliffs, N.J.
39. **O´Sullivan, A.** (1993), Voluntary Auctions for Noxious: Incentives to Participate and the Efficiency of Siting Decisions, Journal of Environmental Economics and Management, Vol. 25, pp. 12-26
40. **Oort, C. J.** (1961), Der Marginalismus als Grundlage der Preisbildung in der Verkehrswirtschaft, Stichting Verkeerswetenschappelijk Centrum, Rotterdam
41. **Palander, T.** (1935), Beiträge zur Standorttheorie, Almquist and Wiksell, Uppsala
42. **Parr, J.** (2002), The Location of Economic Activity: Central Place Theory and the Wider Urban System, in: Ph. McCann (Ed.), Industrial Location Economics, Elgar, Cheltenham, pp. 32-82
43. **Pelzman, S.** (1971), Pricing in Public and Private enterprises: Electric Utilities in the United states, in Journal of Law and Economics, Vol. 14, pp. 109-147

44. **Pelzman, S.** (1976), Toward a More General Theory of Regulation, in: Journal of Law and Economics, Vol. 19, pp. 211-240
45. **Püttner, G.** (1985), Die öffentlichen Unternehmen, Boorberg, Stuttgart, München, Hannover
46. **Rees, R.** (1976), Public Enterprise Economics, Weidenfeld and Nicolson, London
47. **Shepherd, W. G.** (1965), Economic Performance under Public Ownership, Yale University Press, New Haven, London
48. **Thiemeyer, Th.** (1964), Grenzkostenpreise bei öffentlichen Unternehmen, Köln
49. **Thiemeyer, Th.** (1970), Gemeinwirtschaft als Ordnungsprinzip, Duncker & Humblott, Berlin
50. **Thiemeyer, Th.** (1975), Wirtschaftslehre öffentlicher Betriebe, Rowohlt, Einbeck b. Hamburg
51. **Tietz, M.** (1968), Towards a Theory of Urban Public Facilities, Papers of the Regional Science Association, Vol. 21, pp. 35-51.
52. **Tinbergen, J.** (1968), The Spatial Dispersion of Production: A Hypothesis, Schweizerische Zeitschrift für Volkswirtschaft und Statistik, Vol. 97, pp. 412-419
53. **Turvey, R.** (1971), Economic Analysis and Public Enterprises, Allen and Unwin, London
54. **Weber, A.** (1909), Über den Standort der Industrien, Mohr, Tübingen. Translated as: On the Locations of Industries, University of Chicago Press, Chicago 1929
55. **Williams, S. R.** (1999), A Characterization of Efficient, Bayesian incentive Compatible Mechanisms, Economic Theory, Vol. 14, pp.155-180
56. **Wirl, F.** Die Theorie öffentlicher Firmen: Rahmenbedingungen für effiziente Versorgungsunternehmen, Nomos, Baden-Baden 1991
57. **Ziemes, G.** (1992), Politik-ökonomische Betrachtungen öffentlicher Unternehmen, in: P. Friedrich, (Ed.), Beiträge zur Theorie öffentlicher Unternehmen, Zeitschrift für öffentliche und gemeinwirtschaftliche Unternehmen, Beiheft 14, pp.56-82

WHY REORGANIZATION OF FIRMS FAILS: EVIDENCE FROM ESTONIA

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Abstract

Although most countries have firm reorganization option in legislation (either as a separate law or part of insolvency code), the practice of successful reorganizations has remained modest. Reorganization law was introduced in Estonia in late 2008, but only a few firms have been successfully reorganized since. Derived from previous the article studies, what are the reasons for firm reorganization failure. From legal viewpoint, main causes are found to be that firms under reorganization do not submit reorganization plans to court and the preconditions for reorganization lapse. The financial ratios for successful and unsuccessful reorganizations are not significantly different according to independent samples median test. Unsuccessfully reorganized firms perform worse than successful ones in the year before reorganization year, but the opposite phenomenon occurs two and three years before reorganization year.

Keywords: firm reorganization, firm failure, reorganization law

JEL Classification: G33, G34, K22

Introduction

In majority of world countries, firm reorganization option, either through a separate law or integrated into insolvency code, is available in legal system. In 2000s, especially during the years characterized by thorough crisis, the necessity of having efficient legal procedures to overcome difficulties became increasingly important in business environment. One of the key challenges of economic policy and regulations created to achieve its objectives is to guarantee that productive and competitive firms should remain functioning, at the same time cleaning market quickly and efficiently of failed firms. Still, the problem exists that insolvency legislation can delay the movement of resources towards uses maximizing their value (White 1989). The importance of the issue has also been outlined in the European Union level as insolvency resolution systems of several member states have been rather inefficient (see e.g. Bankruptcy … 2002). Despite the introduction or improvement of reorganization procedures in various countries, majority of firms where

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reorganization was started, still become bankrupt (see e.g. Couwenberg 2001), bringing to the question why such phenomenon occurs.

The practice of successful reorganisations in Estonia has been modest compared to petitions filed. According to court statistics (I ja II astme … 2010) during year 2009 there were 93 reorganization petitions submitted to county courts in Estonia (compared to 1562 bankruptcy petitions), but only 6 of them resulted in the approval of reorganization plan, but this of course does not guarantee the successful implementation of approved plans during the reorganization process. One possible reason can be that problems have developed too far for firm and the reorganization process should have been started much earlier.

Derived from previous, the objective of current article is to find out the reasons why reorganization has failed on the example of Estonian firms. The objective will be achieved in two different domains. Firstly, the reorganization failure reasons will be brought out using the classification given in legislation. Secondly, financial indicators of successfully reorganized firms will be compared with those of unsuccessful reorganizations, to find out whether given two groups of firms differ. The article is structured in a classical way. After the introductory part, a short overview of most important results from previous studies focusing on reorganization will be outlined. This is followed by the description of Estonian reorganization law, mainly focusing on the possibilities set in law how the reorganization can become unsuccessful. Given section is followed by the empirical analysis in two domains mentioned under the objective of article. The article ends with conclusive remarks and implications.

1. Previous research about failed firm reorganization

Firm reorganization has received a lot of attention in research of past years, various facets of it being studied. Studies have shown high variance in both, the share of firms applying for reorganization procedure and the positive outcomes from that (see e.g. Couwenberg 2001). United States is often characterized by more positive reorganization outcomes when compared with other countries (Couwenberg 2001, Brouwer 2006). Still, results are highly dependent of datasets used and different periods of economic activity can show highly diverging results also. In addition, it is important to follow whether successful reorganization is considered to be the approval of reorganization plan by creditors, successful implementation of given plan or final survival of firm after the plan has been carried out.

In most general terms more (successful) reorganizations in the United States could be connected to the debtor friendliness of insolvency legislation, when at the same time (Continental-) European systems are considered to favor more creditor (see e.g. Franks et al. 1996, Lopez Gutierrez et al. 2011). Claessens and Klapper (2005) found on the example of 35 countries that higher judicial efficiency leads to increased use of bankruptcy, but stronger creditor rights in turn decrease the use of that. Still, as studies by Kaiser (1996), Davydenko and Franks (2008), Djankov et al.

(2008), Wang (2012) show, the evidence on the specific impact of legal environment on the aplication and outcomes of reorganization still remains mixed.

When coming to firm specific factors, failed reorganization is often connected with failed turnaround (Chowdhury 2002, Sheppard and Chowdhury 2005). Failed reorganizations are linked to wrong timing of turnaround and wrong turnaround activities to overcome problems, namely firms tend to start reorganization at a too late stage and deal more with operational problems rather than initiating strategic reorientation (Chowdhury 2002, Sudarsanam and Lai 2001, Barker III and Duhaime 1997).

Several studies also consider the suitability of firms for reorganization and also the success of reorganization based on past financial ratios. Laitinen (2011) showed that most firms under reorganization are not viable. Also, evidence has been provided that financial ratios might not be good discriminators of successful and failed reorganizations (Poston et al. 1994, Laitinen 2009). Unsuccessful reorganizations can be connected with different financial patterns, as it has been shown that firms go through different failure processes (Laitinen 1991, Lukason 2012). Still, at least some financial indicators are very poor in case of unsuccessfully reorganized firms (Kärkinen 2010).

In Estonia no academic research was found about the causes of firm reorganization failure, although an applied study composed in the Supreme Court of Estonia by Vutt (2011) outlines some reasons of reorganization failure. The roots of the causes of unsuccessful reorganizations could also be derived from Lukason (2010) applied study focusing on all Estonian bankruptcies in 2000s, where it was concluded that most firms are in very poor financial health before bankruptcy is declared.

2. Estonian reorganization law

The Estonian Reorganization Law (afterwards *ERL*) entered into force in 26. December 2008, about 14 years later than the Estonian Bankruptcy Act (afterwards *EBA*). The law has been changed at two points of time, namely the amendments have entered into force in 22. January 2010 and 1. June 2012. Still, named changes have altered only one section of a paragraph describing the scope of application of the law, so for a private or public limited firm being governed by the Estonian Business Code (afterwards *EBC*) no changes have occurred since the first wording of law. Before 26. December 2008 reorganization was possible under EBA, but its practice was almost nonexistent.

As current article focuses on unsuccessful reorganization, the following description of law emphasizes the options in case of which reorganization of firm can fail. Reorganization process is governed by county court by appointing at least one reorganization advisor. Initially, court might decide not to open reorganization proceedings at all. This can in turn be the results of various reasons. Firstly, the reorganization petition must meet the requirements set in different laws. Secondly, it must be motivated that firm's insolvency in the future is likely, it needs

reorganization and the sustainable management of firm is possible in the future (ERL §8). Given principles in ERL §8 clearly indicate that a firm which is already permanently insolvent or will become one no matter of the activities taken to restore its vitality, is not suitable for reorganization procedure.

When reorganization proceedings have been started, then ERL §38 gives that they can come to an end in case of premature termination, revocation of reorganization plan, premature completion of reorganization plan or when the reorganization plan completion date is exceeded. Out of those four general possibilities only one (i.e. premature completion of reorganization plan) symbolizes successful reorganization and all other point to some type of failure. Followingly, the options under given failure categories will be considered in more detail.

ERL §39(2) gives 10 different options in case of which premature termination of reorganization can occur. They are:

1. When entrepreneur violates cooperation obligation (ERL §14), i.e. firm's management does not provide necessary help and information for reorganization proceedings. (i.e. §39(2)((1)))
2. When entrepreneur does not pay funds set by court and meant to finance reorganization advisor(s) and experts to court deposit (ERL §18 and §30). (i.e. §39(2)((2)))
3. When reorganization plan is not approved by creditors (ERL §28). (i.e. §39(2)((3)))
4. When the application for the approval of reorganization plan unapproved by creditors is not satisfied (ERL §30). (i.e. §39(2)((4)))
5. When the reorganization plan unapproved by creditors is not approved (ERL §37). (i.e. §39(2)((5)))
6. When entrepreneur itself applies it (ERL §40). (i.e. §39(2)((6)))
7. When the preconditions to start reorganization proceedings lapse (ERL §40). (i.e. §39(2)((7)))
8. When firm's property is squandered or the interests of creditors are damaged (ERL §41). (i.e. §39(2)((8)))
9. When reorganization plan is not submitted for the date set by court (ERL §42). (i.e. §39(2)((9)))
10. When the claim is not clear (ERL §43). (i.e. §39(2)((10)))

Previous list described situations when reorganization proceedings have been started, but the process does not come to the point where entrepreneur can start acting according to approved plan. Reorganization can fail also after the approval of reorganization plan, namely there are seven different possibilities (ERL §51(1)):

1. When entrepreneur will be convicted of bankruptcy or execution proceeding crime. (i.e. §51(1)((1)))
2. When entrepreneur does not fulfill obligations set in reorganization plan to a significant extent. (i.e. §51(1)((2)))
3. When after at least half of the reorganization plan implementation time has passed and it becomes clear that entrepreneur is not able fulfill obligations set in reorganization plan. (i.e. §51(1)((3)))

4. When reorganization advisor presents an application that it has not been paid its fee. (i.e. §51(1)((4)))
5. When reorganization advisor presents an application that it is not provided help during supervisory actions or is not given information needed by the entrepreneur. (i.e. §51(1)((5)))
6. When entrepreneur applies for it. (i.e. §51(1)((6)))
7. When bankruptcy of entrepreneur is declared. (i.e. §51(1)((7)))

3. Empirical analysis of failed firm reorganizations

3.1. Data and methods for analysis

Two types of data are needed for current analysis. Firstly, reorganization failure reasons are given in court judgments and therefore judgments concerning reorganization cases must be downloaded from court databases. As authors do not have a list of reorganization cases and therefore different keywords have to be used when searching the database of court judgments (i.e. KIS)[2]. As several proceedings have not ended, many court judgments are not publicly available and search using different keywords might not be with highest efficiency, authors could download 78 court judgments about reorganization proceedings in spring 2012 from KIS.

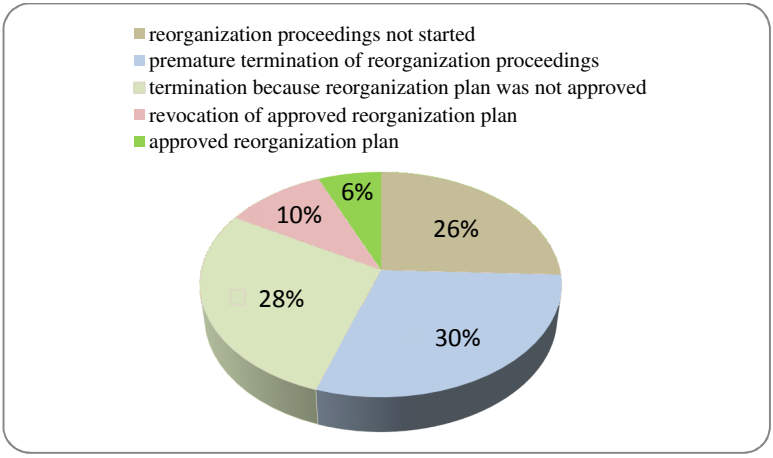

Figure 1. Cases (n=78) for analysis and their shares (compiled by authors).

Figure 1 outlines the cases available for analysis. Out of 78 court judgments, in case of 58 reorganization process was started and for 20 it was not due to different reasons. The 58 cases in turn include only 5 firms in case of which reorganization was successful, i.e. when data is collected the firms still follow the approved plans. Still, it does not guarantee that at some point in the future some of them fail to meet the plan and bankruptcy option becomes topical. It can be seen that for 53 cases the

[2] KIS, i.e. Kohtute infosüsteem – *Data system of courts*.

reorganization proceedings were terminated because of three reasons: premature termination of reorganization proceedings (23 cases), termination because of the non-approval of reorganization plan (22 cases) and revocation of approved reorganization plan (8 cases). The analysis in chapter 3.2 and 3.3 will apply 58 cases outlined previously, as the cases where proceedings were not opened are mostly firms that are already permanently insolvent.

The industries of given firms vary, as the most represented are construction and real estate activities (18 cases for both), followed by manufacturing (9 cases) and sales (8 cases). The remaining 25 cases are mixed over various other industries not mentioned earlier. The empirical study with cases is qualitative, namely the legal reasons of reorganization failure will be extracted by reading through all the cases available for analysis. Although it would be interesting to know the underlying causes in some cases, e.g. why firms failed to follow approved reorganization plan, then such information is normally not given in court judgments (at least partially because ERA does not require it) and it would demand additional interviews with stakeholders (reorganization advisor and firm's management). Figure 2 shows failed reorganization cases by the time which it takes for the negative event to happen. The results have been generalized, using mainly the terms set by law, and no specific durations have been calculated using the court judgments.

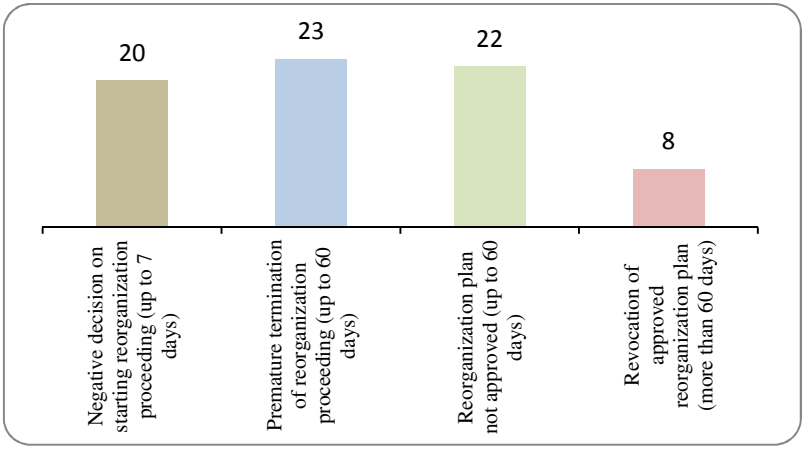

Figure 2. Failure of 73 reorganizations with time till the event (compiled by authors).

The other set of information includes financial data of given firms. For those purposes firms' register codes had to be extracted based on the information in judgments, which in some cases was challenging as the code was not disclosed (but still based on other information in judgment it could finally be disclosed). When the identities of firms were known, pre-reorganization financial data was obtained from Estonian Commercial Register (ECR). The financial data was used to calculate pre-reorganization financial ratios reflecting three different financial domains: solvency,

profitability and capital structure. The ratios describing those three domains were selected based on literature and they are in full and abbreviated form listed in Table 1. Financial variables will be calculated for three years, namely to represent the financial situation in the year before reorganization year, but also two and three years before reorganization year. To denote ratios of specific years, subscripts *1*, *2*, *3* will be applied to represent given years in the sequence outlined previously. On the same principle the number of workers will be presented (noted as *workers*).

Table 1. Financial variables in analysis.

Domain	**Variables**
Solvency	$\frac{Current\ assets}{Current\ liabilities}$, i.e. $\frac{CA}{CL}$ $\frac{Cash}{Current\ liabilities}$, i.e. $\frac{C}{CL}$
Profitability	$\frac{Net\ income}{Net\ sales}$, i.e. $\frac{NI}{S}$
Capital structure	$\frac{Total\ liabilities}{Total\ assets}$, i.e. $\frac{L}{A}$

Source: compiled by authors.

For statistical analysis purposes the studied 58 cases will be classified in two different ways. Classification 1 divides the dataset in two – cases where reorganization was successful (i.e. reorganization plan was accepted, 12 cases, noted as Group 1) and where it was not (46 cases, noted as Group 2), without considering the fact what happened after reorganization plan approval. Classification 2 divides the dataset also in two – firms that finally survived (5 cases, which are all active firms on 1.02.2013, noted as Group 1) and all others (i.e. finally failed firms, 53 cases, noted as Group 2). So given classifications represent two different aspects, i.e. successful reorganization and final survival of firms under reorganization. For the comparison of groups created using two given classifications, independent samples median test (ISMT) will be used. The ISMT views, whether there is at least one sample among k samples, that has different median than others (i.e. H_0: $\Theta_0 = \Theta_1 = \Theta_2 = \ldots = \Theta_k$; H_1: the median of at least one population is different). H_1 will be accepted when asymptotic significance of the test is < 0.05 and significance will be denoted in following tables as "Sig.". A limitation of conducting the test is that for Classification 2 one group includes very small number of cases (n=5), which might impact the test statistic.

3.2. Failure reasons from court judgments

Figure 3 shows the specific reasons why the started reorganization procedure came to an end without successful reorganization of a firm. It can be seen, that endings are dominated by two highly represented reasons (§39(2)((7)) and §39(2)((9))) which mean that precondition for reorganization lapses (i.e. entrepreneur presents application to end the proceeding or firm has become permanently insolvent) or entrepreneurs do not submit reorganization plan to court. Although in some cases the time for plan composition might be too short for entrepreneurs, this does not prevent them from submitting all documents that have been composed so far. So the

majority of cases (i.e. 28 from 53) already point to the fact that firms are not suitable for reorganization due to poor financial situation or inability to provide a plan that would show how the firm would remain vital. All other reasons presented can be divided to two groups by representation: causes with average representation (6 different causes having representation of 3-4 times each) and causes with very low, if not to say incidental representation (3 different causes having representation of 1 time each).

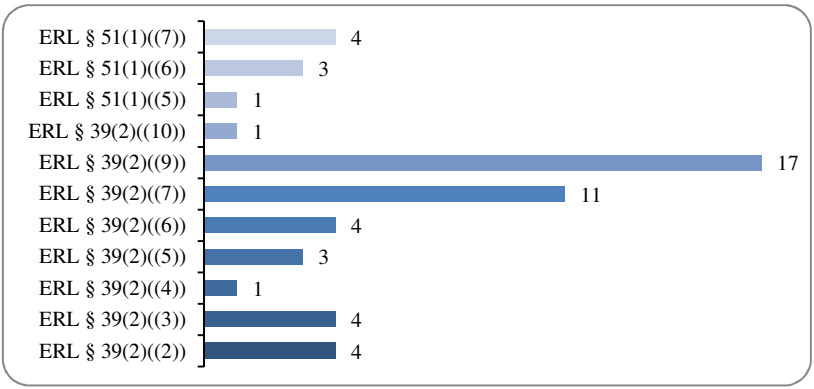

Figure 3. Specific reasons of reorganization proceedings termination for 53 firms using causes given in Chapter 2 of the article (compiled by authors).

The results closely follow which has been noted in literature given in Chapter 1 of the article, namely reorganization failure can be attributed to the cause that firms are just not suitable for reorganization, i.e. they are already insolvent or unable to prove how they can remain vital in the future.

3.3. Financial characteristics

Table 2 shows median values of financial variables within groups for two classifications and in the whole dataset. In addition, for both classifications ISMT significance values have been brought out when medians of two groups inside each classification are compared. All ISMT values are insignificant, so the hypothesis of different median values of the financial ratios is rejected in case of all variables for both classifications. It must be noted, that as in case of many variables the number of observations in Group 1 for both classifications becomes very small due to missing cases[3], then ISMT test applying Yates' correction becomes not significant at 0.05 level. The values in Table 2 are presented without Yates' correction. Yates' correction helps to avoid overestimation when the number of cases is very small, but there is also a threat of overcorrection.

[3] Financial data is available for less cases when compared to the available data stated in Chapter 3.1.

Table 2. Median values for (mostly financial) variables through successful (Group 1) and unsuccessful (Group 2) reorganizations using two classifications given in Chapter 3.1 of the article (compiled by authors).

Variable	Classification 1			Classification 2			All cases
	Group 1	Group 2	Sig.	Group 1	Group 2	Sig.	
$Workers_1$	38	45	1.000	35	60	1.000	38
$Workers_2$	48	40	0.408	46	41	0.589	42
$Workers_3$	43.5	35	0.485	34	40	0.631	39.5
$\frac{L_1}{A_1}$	0.73	0.87	0.097	0.78	0.84	1.000	0.81
$\frac{L_2}{A_2}$	0.73	0.78	0.728	0.73	0.77	0.635	0.77
$\frac{L_3}{A_3}$	0.63	0.70	0.042*	0.64	0.67	0.635	0.67
$\frac{NI_1}{S_1}$	-0.04	-0.18	0.111	-0.02	-0.09	0.645	-0.09
$\frac{NI_2}{S_2}$	0.00	0.01	0.099	0.00	0.01	0.020*	0.00
$\frac{NI_3}{S_3}$	0.01	0.04	0.050*	-0.02	0.03	0.169	0.03
$\frac{CA_1}{CL_1}$	0.83	0.54	0.688	0.20	0.63	0.322	0.61
$\frac{CA_2}{CL_2}$	0.80	0.93	0.728	0.60	0.94	0.154	0.90
$\frac{CA_3}{CL_3}$	0.90	1.17	0.498	0.60	1.20	0.154	1.02
$\frac{C_1}{CL_1}$	0.01	0.01	0.226	0.01	0.01	0.645	0.01
$\frac{C_2}{CL_2}$	0.02	0.02	0.795	0.02	0.02	0.674	0.02
$\frac{C_3}{CL_3}$	0.03	0.02	0.146	0.03	0.02	0.138	0.02

* Significance rose over 0.05 level after application of Yates' correction.
Note: after application of Yates' correction all results are insignificant at 0.05 level.

Although the median values are not significantly different, they do not equal with each other and general tendencies can therefore be commented. In case of both classifications unsuccessful reorganizations are characterized with higher leverage and leverage has increased more sharply in time. In case of both classifications firms in two groups eventually become not profitable (negative $\frac{NI}{S}$), but it is interesting that successfully reorganized firms in case of classification 2 are unprofitable on the third year before reorganization. Still, through all three years their profitability varies around zero, which supports the fact that given firms have submitted reorganization applications at right time, i.e. when problems have not yet emerged

dramatically. The immediate payment readiness reflected by $\frac{C}{CL}$ ratio has been very low for all three years, being almost the same for firms in both groups for specific years viewed. This would indicate high probability of solvency problems for all firms in analysis. Interestingly, the other solvency measure $\frac{CA}{CL}$, which reflects the ability to cover liabilities maturing within an year with current assets, is worse for successfully reorganized firms for all years in Classification 2 and in case of Classification 1 only for the first year before reorganization year the group of firms where plan was successfully approved has higher value when compared to failed ones. This shows some controversy when compared to previous results in literature, which have indicated that troubled, but finally surviving firms witness higher solvency when compared to eventually failing firms (see e.g. Lukason 2013). This could be connected to the idea of different failure processes (see Laitinen 1991) and among unsuccessfully reorganized firms there are evidently more acute failure firms, in case of which financial situation worsens very quickly.

Conclusions and implications

Current article focused on the causes of failed reorganizations among Estonian firms. Previous studies have indicated that an important cause of reorganization failure can be the unsuitability (permanent insolvency or inability to prove firm's future vitality) of firms for reorganization. Also, practice from different legal environments shows a relatively small share of successful reorganizations from both, total reorganization petitions and especially from total firm insolvencies. The Estonian figures from previous years have supported such tendency.

The dataset for current article consisted of 78 court judgments about firm reorganizations, out of which there were 20 cases when reorganization was not started, 53 cases when it was unsuccessful and 5 cases of successful reorganizations. The legal causes of reorganization failure are directly based on the Estonian Reorganization Law, whereas dominantly reorganization fails because of two causes: entrepreneurs do not submit reorganization plan to court or precondition for reorganization lapses (i.e. entrepreneurs present application to end the proceeding or firm has become permanently insolvent).

In two different classifications (in the first successful reorganizations are firms for which reorganization plans are approved and in the second they are firms which eventually remain vital), the financial ratios of successfully and unsuccessfully reorganized firms are compared. None of the studied financial ratios is significantly different through two groups. Still, for firms where reorganization was unsuccessful the values tend to be better two and three years before the reorganization year, whereas the contrary tendency occurs on a year before reorganization year.

As according to the analysis most firms fail at an early stage of reorganization, then before starting reorganization proceedings the vitality of firms should be prescreened in more detail in order to avoid permanently insolvent firms from entering the procedure. The article can be developed in many ways, for instance by

introducing larger dataset and using additional documents from courts to study the causes of unsuccessful reorganizations in more detail.

References

1. Bankruptcy and a Fresh Start: Stigma on Failure and Legal Consequences of Bankruptcy. (2002) Brussels: Philippe and Partners, Deloitte and Touche Corporate Finance, 428 p.
2. **Barker III, V.L., Duhaime, I.M.** Startegic Change in the Turnaround Process: Theory and Empirical Evidence. Strategic Management Journal, Vol. 18, No. 1, pp. 13-38.
3. **Brouwer, M.** (2006) Reorganization in US and European Bankruptcy Law. European Journal of Law and Economics, Vol. 22, No. 1, pp. 5-20.
4. **Chowdhury, S.D.** (2002) Turnarounds: A stage theory perspective. Canadian Journal of Administrative Sciences, Vol. 19, No. 3, pp. 249-266.
5. **Claessens, S., Klapper, L.F.** (2005) Bankruptcy around the World: Explanations of its Relative Use. American Law and Economics Review, Vol. 7, No. 1, pp. 253-283.
6. **Couwenberg, O.** (2001) Survival Rates in Bankruptcy Systems: Overlooking the Evidence. European Journal of Law and Economics, Vol. 12, No. 3, pp. 253-273.
7. **Davydenko, S.A., Franks, J.R.** (2008) Do bankruptcy codes matter? A study of defaults in France, Germany and the UK. Journal of Finance, Vol. 63, No. 2, pp. 565-608.
8. **Djankov, S., Hart, O., McLiesh, C., Shleifer, A.** (2008) Debt Enforcement around the World. Journal of Political Economy, Vol. 116, No. 6, pp. 1105-1150.
9. **Franks, J.R., Nyborg, K.G., Torous, W.N.** (1996) A comparison of US, UK and German insolvency codes. Financial Management, Vol. 25, No. 3, pp. 86-101.
10. I ja II astme kohtute statistilised menetlusandmed, 2009. aasta kokkuvõte [*First and second instance court proceeding data, year 2009 summary*]. (2010) Tallinn: Justiitsministeerium [*Ministry of Justice*], 34 p.
11. **Kaiser, K.M.J.** (1996) European bankruptcy laws: Implications for corporation facing financial distress. Financial Management, Vol. 25, No. 3, pp. 67-85.
12. **Kärkinen, E.-L.** (2010) Taxonomy of six explanatory reorganization interruption patterns: empirical evidence from the Finnish firms, June 2008 - May 2009. International Journal of Management and Enterprise Development, Vol. 9, No. 3, pp. 276-291.
13. **Laitinen, E.K.** (1991) Financial ratios and different failure processes. Journal of Business, Finance and Accounting, Vol. 18, No. 5, pp. 649–673.
14. **Laitinen, E.K.** (2009) Success factors in small firm reorganization. International Journal of Management and Enterprise Development, Vol. 6, No. 3, pp. 300–321.

15. **Laitinen, E.K.** (2011) Assessing viability of Finnish reorganization and bankruptcy firms. European Journal of Law and Economics, Vol. 31, No. 2, pp. 167-198.
16. **Lopez Gutierrez, C., Garcia Olalla, M., Torre Olmo, B.** (2011) Economic valuation of the efficiency of bankruptcy systems. Spanish Journal of Finance and Accounting, Vol. 40, No. 150, pp. 221-250.
17. **Lukason, O.** (2010) Maksejõuetuse põhjuste analüüs [*Analysis of insolvency reasons*]. Tallinn: Justiitsinsiteerium [*Ministry of Justice*], 38 p.
18. **Lukason, O.** (2012) Financial Performance Before Failure: Do Different Firms Go Bankrupt Differently? International Journal of Trade, Economics and Finance, Vol. 3, No. 4, pp. 305-310.
19. **Lukason, O.** (2013) What distinguishes survivors from failures among defaulted firms? Actual Problems of Economics (*forthcoming in 2013*).
20. Pankrotiseadus [Estonian Bankruptcy Act]. [https://www.riigiteataja.ee/akt/129062011014]. Retrieved 10.02.2013.
21. **Poston, K.M., Harmon, W.K., Gramlich, J.D.** (1994) A test of financial ratios as predictors of turnaround versus failure among financially distressed firms. Journal of Applied Business Research, Vol. 10, No. 1, pp. 41–56.
22. Saneerimisseadus [Estonian Reorganization Law]. [https://www.riigiteataja.ee/akt/125042012007]. Retrieved 10.02.2013.
23. **Sheppard, J.P., Chowdhury, S.D.** (2005) Riding the Wrong Wave: Organizational Failure as Failed Turnaround. Long Range Planning, Vol. 38, No. 3, pp. 239-260.
24. **Sudarsanam, S., Lai, J.** (2001) Corporate Financial Distress and Turnaround Strategies: An Empirical Analysis. British Journal of Management, Vol. 12, No. 3, pp. 183-199.
25. **Vutt, M.** (2011) Saneerimiskava kinnitamise praktika [*Practice of reorganization plan approval.*]. Tartu: Riigikohus [*The Supreme Court of Estonia*], 22 p.
26. **Wang, C.-A.** (2012) Determinants of the Choice of Formal Bankruptcy Procedure: An International Comparison of Reorganization and Liquidation. Emerging Markets Finance and Trade, Vol. 48, No. 2, pp. 4-28.
27. **White, M.** (1989) The Corporate Bankruptcy Decision. Journal of Economic Perspectives, Vol. 3, No. 2, pp. 129-151.
28. Äriseadustik [Estonian Business Code]. [https://www.riigiteataja.ee/akt/118122012008]. Retrieved 10.02.2013.

ANALYSIS OF THE SHARE OF EXTENSIVE AND INTENSIVE FACTORS ON CHANGES OF THE OUTPUT ON ALL LEVELS OF THE ECONOMY

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Abstract

The paper answers one of the typical problems of economic theory - how it is in practice possible to measure and to interpret the quality of economic time series oat all economic levels. The task is on the macroeconomic level solved by weighted geometric aggregation of input factors (labour and capital) into summary input factor (SIF) - the method is similar to the Cobb-Douglas production function. The paper shows differences of our approach to the approach of growth accounting – our approach is based on more general condition and covers not only situations of growth of economic indicators but also situations of their falls or stagnation. The approach allows also distinguishing the compensation of input factors. So, the methodology presented in the paper can be used in many practical applications, for instance it enables us to count clearly intensive and extensive parameters of economic growth.

Keywords: dynamic indicators, economic growth, intensive and extensive factors of change of indicators

JEL Classification: C22, C43

1. Introduction

The question as to which factors cause the development dynamics of an economic unit (a firm, region, state, etc.) is one of the most discussed in the economics. Generally speaking, dynamics may be due to extensive or intensive factors; however, the effect of those factors needs to be properly quantified. This article summarises the knowledge from research in the quantification of the given factors, while following on the publications of Hrach and Mihola (2006), Mihola (2007a), Mihola (2007b), Hájek and Mihola (2008a), Hájek and Mihola (2008b), Hájek and Mihola (2009). The research is based on the crucial business criterion of the market economy, i.e. profit, while respecting the limits of the factors of production. In this context, the manner of achieving profit is not immaterial. The instruments included in the text are applicable to businesses as well as to the national economy and other sciences. The correct answer as to the method of generating profit and GDP has a significant impact on the management of large business groups, on seeking a forward-looking direction of national economies and transnational units, as well as

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on tackling the problems of tendering processes, outsourcing and other economic activities.

A crucial feature of the knowledge society is the application of new knowledge or the innovative application of existing knowledge. Schumpeter's economic analysis stresses the key role of dynamic processes based on permanent innovative efforts of businesses. However, innovation in all stages of business activities develops only in the environment which, owing to good education, fosters science and research as well as quality of human resources, and improves the use of innate human capacities. The innovation processes are also associated with the development of communication technologies, the management level, and a more efficient strategy and motivation. Such developments typically entail the use of qualitative or intensive factors of development in particular, as opposed to extensive expansion of the existing production.

In solving practical strategic tasks of the national economy and businesses, it is essential to use proper dynamic indicators that reflect the factor of time, without which neither a serious tendering process nor the increasingly popular outsourcing can exist. Before we derive the appropriate indicators of an innovative or, more generally, qualitative or intensive development, we will give one general illustrative example, which will help us with finding an appropriate basic correlation, on which the entire solution will be based.

2. Initial illustrative example

Suppose we run a successful firm, which supplies the market with production, for which, over the given initial period (referred to as index $_0$), it gains total revenue[2] TR_0, on which it spends total costs TC_0 over the same period. The difference between the two quantities defines the economic profit.

$$EP_0 = TR_0 - TC_0 \qquad (1)$$

Then the total revenue / total cost ratio defines efficiency Ef_0, which expresses the portion of total revenue per CZK 1 of the total cost invested, that is,

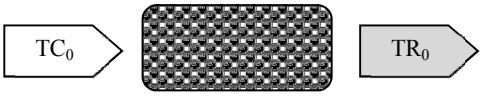
$$Ef_0 = TR_0 / TC_0 \qquad (2)$$

The economic profit / total cost ratio defines the cost profitability, i.e. the portion of profit per CZK 1 of the total cost. Then the correlation between efficiency and profitability can also be derived:

$$Ef_0 = (EP_0 + TC_0) / TC_0 = EP_0 / TC_0 + 1 \qquad (3)$$

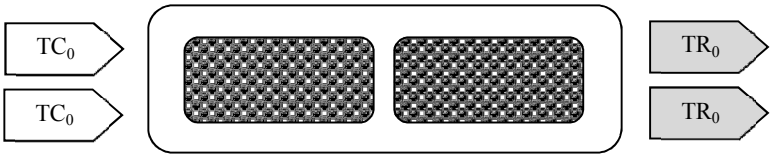
The following schema shows this initial situation.

[2] We will initially describe outputs and inputs using microeconomic symbols, flow variables, TR as the total revenue and TC as the total cost. In both cases, the domain of definition includes positive rational numbers. $TR \geq 0$ and $TC \geq 0$. If $TR < TC$, the economic profit will be negative.



Suppose the market demand for the goods we produce doubles, with no other competing producer operating in the market. The production might be doubled in the two following specific ways: either we will build another production facility next to our existing one, or we will double the output of our existing facility solely through intensive factors of development.

In the first scenario, all inputs need to be doubled. We will need double our land. As the existing production method has worked well, we will build double production capacity of the same quality without any improvements. To operate such a capacity, we will also need double the number of our employees with the same skills. We could even only use our existing staff if reorganised into two shifts. Thus we will double both our capital and labour. The following schema illustrates this purely extensive way of production expansion.



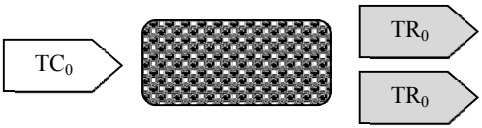
For the purely extensive development, the achieved economic profit and efficiency (referred to as index $_e$) can be expressed by the total revenue and total cost commensurate with the initial situation before our production was doubled, as follows.

$$EP_e = 2.TR_o - 2.TC_o = 2.EP_o \quad (4)$$

$$Ef_e = 2.TR_o / 2.TC_o = Ef_o \quad (5)$$

That said, with the purely extensive development, the economic profit has doubled. Likewise, the total revenue and total cost have also doubled. However, the economic efficiency Ef_0 has not changed compared to the initial situation.

The second scenario includes the same inputs as the initial situation (referred to as index $_0$). We will double our production solely through innovations based on intensive factors. Hence we will do with the same land, and will consequently have the same number of employees and the same amount of capital, which we may innovatively change, however. Another admissible variant is the one of deploying a fewer number of higher skilled employees, who are paid better, however, and thus the total production costs will not change. Only the production will double.



In the purely intensive development, the economic profit (referred to as index $_i$) has more than doubled, as shown in the correlations below. In this scenario, the economic profit equals that of the purely extensive variant increased by the amount of total cost in the initial variant. The economic efficiency (referred to as index $_i$) has exactly doubled:

$$EP_i = 2.TR_o - TC_o = 2.EP_o + TC_o = EP_e + TC_o \quad (6)$$

$$Ef_i = 2.TR_o/TC_o = 2.Ef_o \quad (7)$$

As the economic profit has increased in both variants, a more appropriate indicator of the economic development intensity is the efficiency, which remained unchanged in the purely extensive development, and increased as much as the output in the purely intensive development. This can be used very well in distinguishing the level of economic development intensity.

3. Generalisation of the initial example

In effect, pure developments occur only rarely. Mixed developments, involving both components, are usual. The mixed development may also involve the compensation of individual factors, one of which may have an upside effect while the other may have a downside effect. The general expression of the level of development intensity or extensity must be applicable to any production increase as well as to its decrease or stagnation.

If we need to express the share of the effect of economic profit EP or of total cost in the total revenue achieved, we can do so by using an additive expression derived, for example, from the correlation (1):

$$TR = EP + TC \quad (8)$$

Then we only need to divide the expression (8) by quantity TR, and if the quotients are to be expressed as percentages, the linear equation must be multiplied by 100:

$$100 = 100.EP/TR + 100.TC/TR \quad (9)$$

In the above considered scenario, the economic profit EP and the total cost TC in the initial situation make up 50% of the total revenue TR. In the purely extensive development, these shares remain unchanged, whereas if the production is doubled in a purely intensive manner, the share of profit in total revenue increases to 75% and the share of total cost in total revenue makes up for 25%.

If we wish to calculate the shares of the effect of a multiplicative link, such as the effect of efficiency and total cost on the total revenue, we can modify expression (2) as follows:

$$TR = Ef \,.TC \qquad (10)$$

and subsequently convert expression (10) into a linear additive link using a logarithm. Thus we can also express the share of the effect of the qualitative magnitude in the form of efficiency Ef in the quantitative magnitude in the form of total cost TC.

The inputs and outputs of an economic unit may be of more than just the flow nature at the company level. In the national economy, the output may be expressed, for example, as gross domestic product (GDP) while inputs may be represented by functions of state such as labour L and capital K, which can be aggregated into a summary input[3] of factors SIF.

4. Dynamic problem

If the timeline of flow quantities such as TR, TC, EP, Ef and, where appropriate, the GDP, or of the functions of state such as the number of employees, essential means or the population constitutes what is known as the static problem, the changes in those quantities, measured by the dynamic characteristics of absolute or relative accrual (change rate) or index (change coefficient), constitute the dynamic problem[4]. In both events, we can express the extent to which the development is based on extensive or intensive factors of development at the levels of business, region or national economy.

If τ denotes the initial moment of a monitored period and T denotes the final moment, the number of monitored periods is:

$$m = T-\tau \qquad (11)$$

Then the development of each quantity over a timeline can be observed by means of one of the three following dynamic characteristics used for any characteristic of the relevant system, with the characteristic being referred to as A (a general denomination of a characteristic, which may be TR, NC, L, K, etc.):

- absolute accrual $\Delta(A) = A_T - A_\tau$ (12)
- growth rate $G(A) = \frac{A_T - A_\tau}{A_\tau} = \frac{\Delta(A)}{A_\tau} = I(A) - 1$ (13)
- change coefficient; (chain) index $I(A) = \frac{A_T}{A_\tau} = G(A) + 1$ (14)

If m = 1, then we have dynamic characteristics of two successive periods. In addition to dynamic characteristics, we can also observe efficiency Ef, i.e. the

[3] More details available, for example, in Hájek and Mihola (2009), p. 745, where summary inputs are referred to as symbol N.

[4] Details of the definition of static and dynamic tasks available, for example, in Hájek and Mihola (2009), p. 745, or Mihola (2007b), p. 448.

correlation between input x and output[5] y over the given period of time. The expression of efficiency as a ratio does not necessarily require the same units of input and output quantities. The output quantity will be generally referred to as y (e.g. TR, GDP, etc.) and the input quantity as x (e.g. TC, capital K, labour L, SIF, etc.). This definition, which describes the given system by monitoring the changes in outputs, inputs and interrelations, corresponds to the cybernetic concept of the task. It provides us with information on efficiency[6], i.e. the units of outputs per unit of inputs at time t:

$$Ef_t = \frac{y_t}{x_t} \qquad (15)$$

An inverted value interprets the cost requirements, and specifies how many inputs are required per unit of outputs. Expressions (13), (14) and (15) can be used to derive the following correlations among the specified homogeneous dynamic characteristics[7]:

$$G(y) = G(x) + G(Ef) + G(x) \,.G(Ef) \qquad (16)$$

$$I(y) = I(x) \,.\, I(Ef) \qquad (17)$$

After the derivation of universal correlations for the unambiguous classification of developments according to the shares of qualitative and quantitative (or extensive and intensive) factors, we need to describe these development types first. The detailed derivations of this typology, which is used as the basis for the derivation of universal dynamic characteristics to analyse the intensity of any development, are included in Mihola (2007a). In brief, this typology is evident from Table 1.

5. Dynamic parameters of intensity and extensity

The derivation of the correlations expressing the share of the effect of intensive factors on the development of outputs can be based on both the partly additive expression (16) and the purely multiplicative expression (17). The existing theoretical analyses as well as numerous practical applications that allow for the easy interpretation of results and further generalisation, e.g. into multiple factors, indicate that a logarithmically calculated correlation[8] (17) is more appropriate as the

[5] The domain of definition for inputs as well as outputs includes positive rational numbers: $x \in \langle 0,\infty)$; $y \in \langle 0,\infty)$ then $I(x) \in \langle 0,\infty)$; $I(y) \in \langle 0,\infty)$; $G(x) \in \langle -1,\infty)$; $G(y) \in \langle -1,\infty)$

[6] This is how numerous authors define efficiency, e.g. Klacek (2006), p. 291, says: "*In general, we can define the total productivity of the factors of production as the ratio between the output of a production process and the summary of inputs of the factors of production. SP(t)=Q(t)/N(t), where Q is the product and N is the summary input"*

[7] For details of the correlations, sorts and types of aggregations between a static task and a dynamic task, see Mihola (1979) and Mihola (2005).

[8] Even though growth rates in economic calculations are often very low numbers, it is not always the case. This is particularly relevant in use of short time intervals and in a deeper hierarchical structure of the economy, e.g. at the enterprise level. An uncontrolled omission of this multiplicative term is a similar operation as a not quite correct omission of the powers of fluents used by Newton in his derivations. See e.g. Seife (2005), p. 133.

basis for further computations. If expression (16) is used, we must either omit[9] the multiplicative part of that expression, i.e. G(x).G(Ef), or split that term 'somehow'. This problem even increases if we consider more than 2 factors because the number of multiplicative terms and their extent increase rapidly.

Literature specifies certain solutions that are only applicable to positive accruals[10] of both factors. However, a dynamic task also needs to reflect the instances of declines in the individual factors as well as in the output. Furthermore, both considered factors may have a downside effect on outputs. If one factor has an upside effect while the other has a downside effect, the effects will partly compensate each other, or the mutual compensation may even lead to zero output growth. The following expressions were derived[11] to truly express all situations that may occur in a dynamic task.

The derivation result is a correlation for a dynamic parameter of intensity:

$$i = \frac{\ln I(Ef)}{\left|\ln I(Ef)\right| + \left|\ln I(x)\right|} \tag{18}$$

and a supplementary correlation for extensity:

$$e = \frac{\ln I(x)}{\left|\ln I(Ef)\right| + \left|\ln I(x)\right|} \tag{19}$$

For the purely intensive development, expressions (18) and (19) generate $i = 1$ and $e = 0$ (or 100% and 0%, as appropriate), while for the purely extensive development, expressions (18) and (19) generate $i = 0$ and $e = 1$. Even in all the other instances, the given pair of dynamic parameters provides clear information on the type of development in the given sub-period or total period.

Adding up expressions (18) and (19) will derive the general correlation between the parameters of intensity and extensity.

$$i.\mathrm{sgn}[G(Ef)] + e.\mathrm{sgn}[G(x)] = 1 \quad \text{or} \quad \mathrm{l\,i\,I} + \mathrm{Iel} = 1 \tag{20}$$

The sum of both parameters in quadrant I, where both factors contribute to growth, equals 1. In quadrant III, the sum is -1, with both factors having a downside effect. In compensation quadrants II and IV, the sum of dynamic parameters of intensity and extensity equals 0. This can be used as guidance in the types of development. The sum of both dynamic parameters tells us whether it is quadrant I or III, or whether it is compensation. The fact that the sum of absolute values of both parameters equals 1 is used for designing well-arranged bar charts, for instance, which clearly express the shares of the effects of both factors.

[9] However, use of this procedure for the growing quantities is nothing new at all. As long ago as in 1978, this expression was proposed in Cyhelský, Matějka (1978), p. 302.
[10] E.g. Cyhelský and Matějka (1978), Toms and Hájek (1966), Toms (1983), Toms (1988).
[11] The derivation is detailed in Mihola (2007a).

The overview of values of the derived dynamic parameters for basic developments is included in Table 1.

Table 1. Values of intensity and extensity parameters for basic developments

	Names – basic developments	Characteristics	Occurrence	Output development	Type	Parameter value of intensity i (%)	Parameter value of extensity e (%)
1	Purely intensive growth	Growth in output y only influenced by Ef developments	axis y	Growth	Net develop-ments – effect of only one parameter	100	0
2	Purely non-intensive decline	Decline in output y only influenced by Ef developments		Decline		-100	0
3	Purely extensive growth	Growth in output y only influenced by x	axis x	Growth		0	100
4	Purely non-extensive development	Decline in output y only influenced by x		Decline		0	-100
5	Combined intensive & extensive growth	The same effect of Ef and x on growth in output y	Symmetry axis of quadrants I and III	Growth	Consonant effect	50	50
6	Combined non-intensive & non-extensive decline	The same effect of Ef and x on decline in output y		Decline		-50	-50
7	Intensive compensation	Stagnation of output y by growth in Ef and decline in x	Zero growth hyperbola	Stagnation	Compen-sation	50	-50
8	Extensive compensation	Stagnation of output y by decline in Ef and growth in x				-50	50

Derived dynamic parameters can be used wherever we consider the effect that the development of the relevant absolute and relative quantities had on the result achieved. For example, the effect and inertia, i.e. steady motion, that a speed change (i.e. acceleration) had during accelerated linear motion over a distance achieved. These parameters can be used wherever any outputs and inputs variable over time exist and where the effectiveness or efficiency measurable by changes in effectiveness or efficiency usually varies.

The advantage of those parameters is that they can be compared in respect of time. That said, they are comparable without further modifications even though they have been calculated for timelines of different lengths. This is due to the automatic averaging because no root extraction (averaging) is necessary for base indices, as shown in expression (18) (where a base index for *m* years is considered):

$$i = \frac{\ln \mathrm{I}^{1/\mathrm{m}}(\mathrm{x})}{\left|\ln \mathrm{I}^{1/m}(\mathrm{u})\right| + \left|\ln \mathrm{I}^{1/m}(\mathrm{x})\right|} = \frac{(1/\mathrm{m})\,\ln \mathrm{I}(\mathrm{x})}{(1/m)\left|\ln \mathrm{I}(u)\right| + (1/m)\left|\ln \mathrm{I}(x)\right|} \tag{21}$$

Derived dynamic parameters are not limited in space, and allow for easily comparing different countries, sectors, businesses, etc., due also to the fact that it is a dimensionless quantity. This is because definition expressions (18) and (19) only include dynamic characteristics, i.e. indices. It is an advantage of any dynamic parameter because these are independent of a scale or the units of characteristics used in static tasks.

Correlations (18) or (19) operate with growths as well as declines in any combination, including compensations, at any type of output development. The correlations also work with the limit states of net developments without problems. Also, there is no need to adopt any special simplifying assumptions or to check whether or not an unacceptable distortion has occurred during an approximate calculation, if any. The calculation is transparent, repeatable any time, and will always yield the same result.

The result obtained has a clear interpretation and constant information substantiality. The parameter of intensity *i* indicates the proportion at which the intensive (qualitative) factor, which makes itself felt as a change in efficiency, i.e. a change in the share of outputs and inputs over the given period of time, has contributed to the final development of outputs. The parameter of extensity *e* gives additional information on the proportion at which the extensive (quantitative) factor, i.e. the inflow of qualitatively unchanged inputs over the given period of time, has contributed to the final development of a product (outputs, effects).

A good interpretation of parameters leads to their easy application. Dynamic parameters aptly complement the existing characteristics with a fairly new perspective. The effort to express a share of influence or of the consequent contributions is evident in almost any economic analysis. The primary advantage of the solution presented here is that it comprehensively and systematically addresses all situations, including declines, decreases in one of the factors, and consequently in compensations. However, one should avoid any isolated assessment of those parameters irrespective of the distance from the point of stagnation, where all isoquants converge. Naturally, in assessing the developments which are very close to stagnation, the relevance of the assessment as to how intensively this was achieved

disappears. For the same reason, it would be easy to manipulate the sizes of dynamic parameters.

6. Macroeconomic interpretation

Most practical applications have been subject to experiments using a classical macroeconomic task, where input *y* constitutes the GDP in constant prices and inputs are expressed by functions of state, namely labour L and capital K. Timelines and relevant dynamic characteristics of those quantities are also exogenous quantities of growth accounting[12]. A practical use of the growth accounting correlation is the specification of the residual quantity, which is the growth rate of the summary productivity of factors[13] G(SPF)[14]; e.g. Mihola (2007), p. 111, specifies the correlations[15]:

$$G(Y) = G(SPF) + v_L.G(L) + (1- v_L).G(K) \quad (22)$$

$$G(SPF) = G(Y) – v_L.G(L) – (1- v_L).G(K) \quad (23)$$

Here the expression is derived, under special assumptions, from an additive identity of national economy[16], as part of the reflections on the development of what is known as potential output. This includes weight v_L as the labour elasticity of output, and weight v_K as the capital elasticity of output. Assuming that the return to scale is constant, the sum of those weights equals 1:

$$v_L.+ v_K = 1 \quad (24)$$

In the expression (22), these weights are used in a weighted aggregation of the rates of growth of labour and capital. The assumption of the additive aggregation in a static task is not realistic just because one cannot imagine an economy without either of these factors, i.e. completely without labour or without any capital. While these factors are substitutable, they are substitutable relatively rather than absolutely. Hence the likely outcome is a multiplicative aggregation of these factors in a static task, with which a hyperbola-shaped isoquant is commensurate.

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[12] An analogous expression is derived in numerous studies and textbooks, e.g. Mihola (2007a), p. 108, or Hájek and Mihola (2009, p. 746). Today, this correlation constitutes the backbone correlation of growth theories that are primarily concerned with long-term economic growth of potential output.

[13] Robert M. Solow, see Solow (1957), examines what is known as steady state growth, where the capital and labour growth rates reach equilibrium. Output growth per capita is subject to technological progress, which he sees as an exogenous factor here. Further elaboration of this idea has shown that not only technological progress but also the collective effect of all intensive factors of growth is relevant.

[14] For example Denison (1967, see p. 15), used the SPF growth rate for an international comparison of 9 developed countries.

[15] The calculation of the total factor productivity using this correlation has been discussed in a number of studies, such as OECD (2003), OECD (2004); some of Czech authors include Hurník (2005), Dybczak et al. (2006), Hájek (2006), Ministry of Finance (2009); in Slovakia: Zimková, Barochovský (2007).

[16] It also includes average wages and capital profitability dependent on labour or capital. In tackling this problem, one should also consider the issues of investment efficiency and the ongoing substitution of labour by technology.

The growth rate of the summary productivity of factors G(SPF), calculated from expression (23), makes it possible, if the output growth rate is known, to calculate[17] also the share of the effect of the development of intensive factors on GDP developments, which can be ascertained from expression (18). To be able to use modified expression (18), we initially need to aggregate both inputs in a static task, i.e. labour L and capital[18]. This quantity is referred to as the summary input of factors (SIF). Both additive[19] and multiplicative aggregation functions are used to this end in static as well as dynamic tasks[20]. We believe that the most appropriate form of aggregation is the weighted geometric aggregation[21], which is used, for example, in the form of Cobb-Douglas with technical progress[22].

$$Y = SPF \,.\, L^{\alpha} \,.\, K^{(1-\alpha)} \qquad (25)$$

Thus $$SIF = L^{\alpha} \,.\, K^{(1-\alpha)} \qquad (26)$$

which means $$Y = SPF \,.\, SIF \qquad (27)$$

Expression (27) is a macroeconomic application of expression (10), and can be derived from expression (15). Given the properties of indices, expression (27) can be easily used to derive its own dynamic form, analogous to expression (17):

$$I(Y) = I(SIF) \,.\, I(SPF) \qquad (28)$$

By the logarithmic calculation of this expression, we will obtain the initial

[17] In these events, literature usually uses the share of growth rates G(SPF)/G(GDP), which is approximately applicable to positive quantities only, where G(SPF) < G(GDP); otherwise the result is difficult to interpret.

[18] Unlike other authors, we consider the factors of labour and capital to be crucial factors variable in time and complementing each other. In the Czech Republic, e.g. Klacek and Vopravil (2008) – on the KLEM production function – deals with multiple factors.

[19] The additive aggregation of labour L and capital K in a static task can be ruled out because thus we would admit either the possibility of generating production solely on the basis of labour without any capital (and consequently without tools) or production solely on the basis of capital, i.e. completely without staff, and this is impossible even in the highest level of automation. As both scenarios are unrealistic, only a weighted or simple multiplicative aggregation or geometric mean comes into consideration.

[20] The additive aggregation of labour L and capital K in a dynamic task at the multiplicative link in a static task means the use of correlation (16), and this necessitates an omission of the multiplicative term of that expression, with this being unfair and possibly leading to serious inaccuracies. See, for example, Hájek and Mihola (2009), p. 742-743.

[21] The sum of weights equalling 1 leads to a linear production-possibility frontier (PPF) in a 2*2*2*2 model. If these weights are identical, i.e. 0.5, it is a simple geometric mean, and the isoquants will be hyperbolae symmetric around the axis of the first quadrant. For asymmetric weights, the asymmetry of isoquants will primarily express the long-term prevailing substitution by technology. Thus the interpretation of weights will change vis-à-vis that in Hájek and Mihola (2009, p. 746).

[22] We believe that one of the most comprehensive studies of multiplicative type production functions with factors of labour, capital and technical process is the Barro and Sala-i-Martin book (1995), where p. 29 includes the Cobb–Douglas production function in the form of $Y=AK^{\alpha}L^{(1-\alpha)}$. The study also includes comparisons to the proposals by Leontief Y = F(K,L)=min(AK, BL) from 1941; Harod from 1939; Domar from 1946; Solow from 1969; and many more. In the Czech Republic, see article Hájková and Hurník (2007), for instance.

correlation for a macroeconomic modification of macroeconomic dynamic parameters of intensity and extensity. The macroeconomic form of the dynamic parameter of intensity is:

$$i = \frac{\ln I(SPF)}{|\ln I(SPF)| + |\ln I(SIF)|} \tag{29}$$

The macroeconomic form of the dynamic parameter of extensity is:

$$e = \frac{\ln I(SIF)}{|\ln I(SPF)| + |\ln I(SIF)|} \tag{30}$$

The calculation of the share of the effect of intensive and extensive factors using these parameters has numerous advantages vis-à-vis the calculation of the share of effect on the basis of correlation (23):

- It is applicable not only to an increase of the effect of sub-factors but also to their decrease and mutual compensations, i.e. opposing effects, which may lead to the complete compensation into zero output growth as well as to a GDP decline;
- It is not affected by any errors arising from the omission of multiplicative terms of the additive link in respect of growth rates;
- It allows for a very illustrative spatial representation of the trajectories of development (in a chart) of the change coefficients I(SPF) and I(SIF), where the isoquants (contour lines) of the rates of GDP growth and dynamic parameters of intensity as well as extensity can be shown concurrently.

The dynamic parameters of intensity and extensity are applicable not only to the measurement of intensity of economic developments but also whenever we need to find out how the absolute component such as time and the qualitative component such as speed have contributed to the development of a quantity. An interesting application of the above dynamic parameters is that of the assessment of development or innovation cycles or the analysis of demand or supply curves, where the use of dynamic parameters of intensity and extensity proves to be more universal than normally used elasticity, which lacks standardised values.

7. Example – Development of the Czech economy

The use of the aforementioned correlations will be illustrated in an example analysing the Czech Republic's economy from 1995 to 2010. The initial data constitutes the timelines of real GDP (in constant prices for 2000), number of workers who represent labour L, and net fixed capital (in constant prices for 2000) which represents capital K. The first step includes the calculation of the summary input of factors SIF, correlation (26) (weight α was set at 0.57 ± 0.021). The total factor productivity was calculated by direct computation according to correlation (15). Dynamic characteristics and then the dynamic parameters of intensity *i* and extensity *e*, correlations (18) and (19) are calculated from all the quantities

monitored. Table 2 contains the annual growth rates[23] of all key quantities and the dynamic parameters of intensity and extensity.

Table 2. Growth rates of macroeconomic aggregates and parameters of intensity and extensity in the Czech Republic (%)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
G(GDP)	4,0	-0,7	-0,8	1,3	3,6	2,5	1,9	3,6	4,5	6,3	6,8	6,0	2,5	-4,2	1,6
G(L)	0,9	0,2	-1,5	-3,4	-0,2	0,5	0,6	-1,3	0,3	1,0	1,6	2,7	1,2	-1,2	-1,9
G(K)	2,9	2,0	2,0	1,5	1,7	1,8	1,3	1,8	1,6	1,6	1,7	2,3	1,8	1,8	1,6
G(SIF)	0,9	0,9	1,4	-1,6	0,4	0,8	-0,5	-1,1	1,7	1,3	1,8	2,7	0,1	0,2	-0,2
G(SPF)	3,1	-1,6	-2,1	2,9	3,3	1,6	2,4	4,8	2,7	5,0	4,9	3,1	2,4	-4,4	1,8
i	78	-65	-61	65	90	66	83	80	61	80	72	54	97	-95	89
e	22	35	39	-35	10	34	-17	-20	39	20	28	46	3	5	-11

Source: Czech Statistical Office (2011), ECFIN (2011), own calculations.

The above growth rates of real GDP were generated with the effects of intensive and extensive factors shown in Bar Chart 3. The height of each bar is 100%, the bar is divided into intensive and extensive effects, and each of those components may be positive or negative. We saw partial compensations of both effects in 1997 to 1999; in 2002; 2003; 2009 and 2010, one of the dynamic pair parameters was negative but they were not of the same size in the absolute value.

Table 1 and Charts 1 and 2 show the developments in the individual years of the analysed period. In 1997; 1998 and 2009, the real GDP declined. This decline occurred while the summary inputs were up by 0.9% in 1997, by 1.4% in 1998 and by 0.2% in 2010 but the SPF was down by 1.6% in 1997, by 2.1% in 1998 and by 4.4% in 2009. Thus the contribution of extensive factors was outweighed by the decline of intensive factors. The effects of extensive factors on economic growth were 35% in 1997; 39% in 1998 and 5% in 2009. By contrast, the downside effects of intensive factors on growth were 65% in 1997; 61% in 1998 and 95% in 2009.

As concerns the share of the effect of intensive factors, 1999 was an interesting year, as the increase in real GDP by 1.3% was achieved at the decline in summary inputs by 1.6%, and this decline was more than counterbalanced by a 2.9% SPF rise. In that year, the share of intensive factors in real GDP growth was 65% while extensive factors had a 35% downside effect. A similar situation, albeit more moderate, reoccurred in 2002, 2003 and 2010. In 2002, the real GDP went up by 1.9% at the moderate decline in summary inputs by 0.5%, which was more than counterbalanced by a 2.4% SPF rise. In that year, the share of intensive factors in real GDP growth

[23] Authors who calculated the SPF using growth accounting have arrived at similar results, e.g. Šindel (2009), slide 47, specifies the following G(SPF) for years 1996 to 2004: 2.9; -1.3; -1.2; 1.7; 3.5; 1.5; 0.4; 2.8; 3.7%.

was 83% while extensive factors had a 17% downside effect. In 2003, the effect of intensive factors was stronger because real GDP growth of 3.6% was generated at the decline in summary inputs by 1.1%. This decline was more than counterbalanced by a 4.8% SPF rise. In that year, the share of intensive factors in real GDP growth was 80% while extensive factors had a 20% downside effect. In 2010, the effect of intensive factors was even stronger because real GDP growth of 1.6% was generated at the decline in the summary inputs by 0.2%. This decline was easily counterbalanced by a 1.8% SPF rise. In that year, the share of intensive factors in real GDP growth was 89% while extensive factors had an 11% downside effect. The type of developments shown in the four years described was exceptional because real GDP growth was fuelled by such a strong increase in intensive (qualitative) factors that it outweighed the decrease in extensive factors.

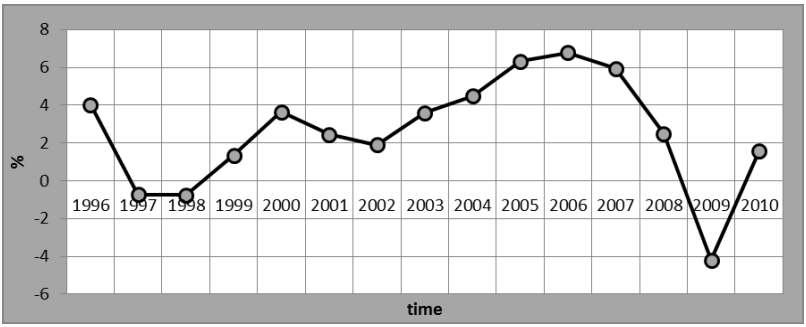

Chart 1. Rates of real GDP growth in the Czech Republic in 1995-2010 (%) (Czech Statistical Office, 2011).

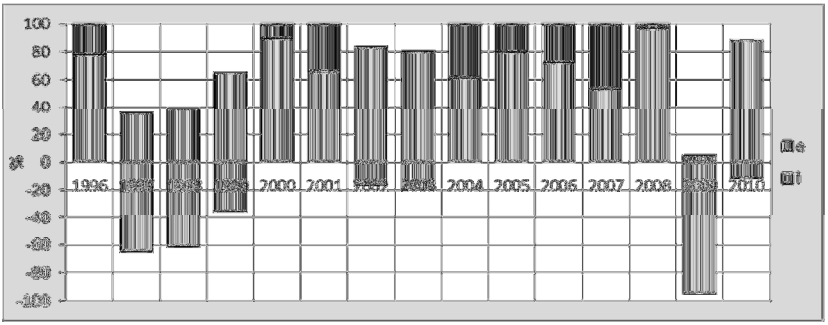

Chart 2. Shares of the effects of intensive and extensive factors in real GDP of the Czech Republic (%) (Czech Statistical Office (2011), ECFIN (2011), own calculations).

In all the other years, i.e. 1996; 2000; 2001, and in the last four years, 2004 to 2008, both factors, i.e. intensive and extensive, always had an upside effect. Intensive factors were always predominant, with their share being twice to eight times greater than that of extensive factors. Only in 2007, the predominance of the intensive factor

was modest. During those years, the shares of extensive factors ranged between 1/8 and 1/2 while the corresponding intensive factors ranged between 7/8 and 1/2. The greatest intensity of 90% was achieved in 2000. The lowest positive intensity of 54% was achieved in 2007.

The first period examined (1997-1998) saw a recession, arising from the instable political climate, making itself felt in highly restrictive monetary and fiscal policies. Uncoordinated interventions even led to a monetary crisis in 1997. Institutional barriers had the strongest impact on the banking sector, which found itself in a critical situation. The privatisation that was frequently unconsidered, and thus too spontaneous, led to instability, which delayed the required restructuring of enterprises and the launch of a more stable and more forward-looking innovative management. Investment stagnation was also accompanied by the poor inflow of foreign direct investments. There was still the aftermath of the strong past structural focus on heavy industry. The effect of high ecological investments was also evident.

Although the institutional environment was not yet refined in the subsequent period of 2000 to 2007, it improved significantly with the preparations for and the accession to the EU in 2004. The consequences of the growth-oriented economic policy and a more rational behaviour of the banking sector after its increased consolidation as well as the post-privatisation behaviour of enterprises had a positive effect. Domestic investments increased significantly, as did the inflow of foreign investments. Enterprises under strong foreign control were gaining ground, and exports were rising. However, the growth acceleration was not yet accompanied by the key long-lasting qualitative factors in HR improvement, and science and research development as a precondition of boosting the innovation process. The increasing openness of the economy had a positive effect on its performance but its dependence on and consequently its susceptibility to external environment increased somewhat as well. In addition, this vulnerability is boosted by the narrow portfolio of primary activities, particularly focused on the automotive industry, which is highly overgrown to the detriment of other transport alternatives as concerns ecology.

In 2008, the country lost its growth rate. The strong impact of intensive factors is due to the pre-crisis ousting of workforce rather than other factors. This became fully evident during the 2009 restriction, which was a result of the Czech economy reflecting the impacts. While 2010 was a year of adaptation to the new conditions, the adaptation is probably not based systematically, in a change of the structure of the economy. The negative extensity of 2010 was due to the post-crisis reduction of the economy in respect of both factors considered.

8. Conclusion

Development intensity is one of the major indicators of the quality of economic developments. At the macroeconomic level, it can be measured as the ratio between real GDP and summary input, which includes labour and capital. Its increase is a result of qualitative, i.e. intensive, factors of growth. To aggregate the factors of

labour and capital in the summary input SIF, we used the weighted geometric aggregation.

To find out the shares of intensive (i.e. qualitative) and extensive factors in real GDP growth, we used the dynamic parameter of intensity and extensity. These parameters allow for measuring their shares if the factors have opposing effects as well as if the real GDP declines, are universally applicable, and are easy to compare in respect of time and space. This makes it possible to extend economic analyses with a new perspective. The application of the suggested methodology to the analysis of the Czech Republic's developments in 1995-2010 has shown that these parameters aptly complement conventional analysis tools.

References

1. **Barro, R., Sala-i-Martin, X.** 1995. *Economic Growth*. McGraw-Hill, 1995.
2. **Cyhelský, L., Matějka, M.** 1978. "K některým problémům a důsledkům konstrukce kauzálního modelu (On Certain Problems and Consequences of the Design of the Causal Model)." *Statistika*, No. 7, 1978.
3. Czech Statistical Office (ČSÚ aka CZSO). 2011. Národní účty 2011 (The 2011 National Accounts). Prague: CZSO, 2011. http://www.czso.cz..
4. **Denison, E. F.** 1967. *Why Growth Rates Differ: Postwar Experience in Nine Western Countries.* Washington, D.C.: The Brookings Institution, 1967.
5. **Dybczak, K., Flek, V., Hájková, D., Hurník, J.** 2006. "Supply-Side Performance and Structure in the Czech Republic (1995-2005)." Working Paper No.4. Prague: Czech National Bank, 2006.
6. ECFIN. 2011. Statistical Annex of European Economy. Brussels: European Commission, ECFIN, Autumn 2011.
7. **Hájek, M.** 2006. "Zdroje růstu, souhrnná produktivita faktorů a struktura v České republice (Growth Resources, Overall Factor Productivity and Structure in the Czech Republic)." *Politická ekonomie*, No. 2, 2006.
8. **Hájek, M., Mihola, J.** 2009. "Analýza vlivu souhrnné produktivity faktorů na ekonomický růst České republiky (Analysis of the Influence of the Total Factor Productivity on the Czech Republic's Economic Growth)." *Politická ekonomie*, no. 6, 2009.
9. **Hájek, M., Mihola, J.** 2008a. "Udržitelný růst – matematický aparát (Sustainable Growth – Mathematical Device)." *Statistika*, No. 2, 2008.
10. **Hájek, M., Mihola, J.** 2008b. "Udržitelný růst – analýza České republiky (Sustainable Growth – An Analysis of the Czech Republic)." *Statistika*, No. 6, 2008.
11. **Hájek, M., Toms, M.** 1967. "Produkční funkce a hospodářský růst Československa v letech 1950-1964 (Production Function and Economic Growth of Czechoslovakia in 1950-1964)." *Politická ekonomie*, No.1, 1967.
12. **Hájková, D., Hurník, J.** 2007. "Cobb-Douglas Production Function: The Case of a Converging Economy." *Finance a úvěr*, No. 9-10, 2007.
13. **Hrach, K., Mihola, J.** 2006. "Metodické přístupy ke konstrukci souhrnných ukazatelů (Methodical Approaches to the Design of Summary Indicators)." *Statistika*, No. 5, 2006.

14. **Hurník, J.** 2005. "Potential Output: What Can the Production Function Approach Tell Us?" Economic Research Bulletin No.1, Vol.3. Prague: Czech National Bank, 2005.
15. **Klacek, J.** 2006. "Souhrnná produktivita faktorů – otázky měření (Total Factor Productivity – The Measurement Issues)." *Statistika*, No.4, 2006.
16. **Klacek, J., Vopravil, J.** 2008. "Multifaktorová souhrnná produktivita faktorů: Empirickáaplikace produkční funkce KLEM [výzkumná studie ČSÚ] (Multifactor Total Factor Productivity: An Empirical Application of the KLEM Production Function [A Research Study by the Czech Statistical Office])." Prague: CZSO, December 2008.
17. **Mihola, J.** 2007a. "Agregátní produkční funkce a podíl vlivu intenzivních faktorů (Aggregate Production Function and the Share of the Influence of Intensive Factors)". *Statistika*, No. 2, 2007.
18. **Mihola, J.** 2007b. "Souhrnná produktivita faktorů – přímý výpočet (Total Factor Productivity – The Direct Calculation)." *Statistika*, No. 6, 2007.
19. **Mihola, J.** 1979. "Matematický aparát konstrukce syntetických ukazatelů (The Mathematical Device to Design Synthetic Indicators)." *Ekonomicko matematický obzor,* No. 1, 1979
20. **Mihola, J.** 2005 *Kvantitativní metody – distanční stadium (Quantitative Methods – Distance Learning).* Prague: University of Finance and Administration.
21. Ministry of Finance of the Czech Republic. 2009. *Makroekonomická predikce ČR (Macroeconomic Forecast of the Czech Republic).* Prague: Ministry of Finance of the Czech Republic, January 2009.
22. OECD. 2003. *The Sources of Economic Growth in OECD Countries.* Paris: OECD, 2003.
23. OECD. 2004. *Understanding Economic Growth.* Paris: OECD, 2004.
24. **Seife, Ch.** 2005. Nula (Zero). Dokořán a Agro, Prague, 2005.
25. **Solow, R. M.** 1957. "Technical Change and the Aggregate Production Function." *Review of Economics and Statistics*, Vol.39, August 1957.
26. **Šindel, J.** 2009. *Dlouhodobý růst a mezinárodní komparace (Long-term Growth and International Comparisons).* Prague: University of Economics (VŠE), Faculty of National Economy, 2009.
27. **Toms, M.** 1983. "K typologii procesu intenzifikace (On the Intensification Process Typology)." *Politická ekonomie*, No. 8, 1983.
28. **Toms, M.** 1988. *Proces intenzifikace: teorie a měření (The Intensification Process: Theory and Measurement).* Prague: Academia, 1988.
29. **Toms, M., Hájek, M.** 1966. "Příspěvek k vymezení extenzivního a intenzivního růstu (A Paper to Contribute to the Definition of Extensive and Intensive Growth)." *Politická ekonomie*, No. 4, 1966.
30. **Zimková, E., Barochovský, J.** 2007. "Odhad potenciálneho produktu a produkčnej medzery v slovenských podmienkach (A Forecast of Potential Output and Output Gap in Slovak Conditions)." *Politická ekonomie*, No. 4, 2007.

THE SYSTEM OF FIRM SUPPORT GRANTS IN ESTONIA: WHOM DOES IT FAVOR?

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Abstract

After joining the European Union, remarkable support has been provided to Estonian firms through government grants financed from EU funds, but so far it has not been systematically studied, which firms can get support from them. Current study analyzes all grants for firms financed from EU funds in Estonia in the period of 2007-2013. The paper outlines most supported firms based on activities financed and restrictions set on firms and application. The results indicate that some limitations make only a narrow range of firms eligible to get financial support. The grant measures in different implementing units providing grants vary a lot. Also, grants directed to fixed asset investments have more restrictions when compared with those directed to reimbursement of costs.

Keywords: EU funds, government grants, support system

JEL Classification: H81

Introduction

Since joining the European Union (EU), Eastern European countries have been provided a lot of financial support from EU funds, whereas this has been accompanied by the debate over the necessity and size of given support. Such debate has focused on various facets – for instance some countries are blamed of being grant-dependent and also intra-country inefficient grant provision decisions have been criticized. In Estonia the share of support (mainly from EU) in state budget during last three years (i.e. 2010-2012) has been around 19% (see Statistics Estonia … 2013), which can be considered a high figure. In addition, the distribution of EU funds in Estonia has been under severe criticism, e.g. by the National Audit Office (2010), because of not fulfilling the goals it is designed to achieve. The reasons why grants do not serve their purpose facilitating economic growth and/or eliminating market failures can rely in their wrong setup. Namely, grants might have been designed to support firms which do not need them or are not vital enough, but also the problem can lie in the too narrow range of activities supported or too tough preconditions set for grant applicant. In the light of previous an essential question

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rises, which firm is eligible to be supported by state grants. An answer to given (research) question has a very practical implication by enabling policy makers to change grant distribution mechanisms in order to make the support available to wider range of subjects or in turn constraining distribution principles wherever appropriate.

Derived from previous, the article aims to find out whom do Estonian business support grants provided from EU funds in the program period 2007-2013 favor. More specifically, the objective is to study which activities are supported and how do the requirements set restrict potential applicant. The achievement of the objective will allow to conclude whether the design of grant system is shifted towards favoring narrow range of firms or on the contrary it is well-grounded to support firms through the whole spectrum of economy. In order to achieve the objective, the article is divided into following sections. Firstly, literature about public firm support grants is considered. Then, the Estonian system of grants to firms through EU funds in the program period of 2007-2013 will be described. This is followed by empirical analysis where first of all data for analysis is described, followed by outlining descriptive results from data processing and its analysis. Finally, main conclusions and policy implications from the study are presented.

1. Research about public grants to firms

Research about public grants is thorough and multifaceted. The topic is inevitably connected to other research fields like public finances, public administration and public economics in general. Different theoretical and empirical approaches can be found about various facets of public funds allocation, whereas the discussion often concerns whether and to what extent should state (financially) support firms. The effect of grants in resolving market failures, increasing growth and productivity, but also the interconnection of the aforementioned results has not been explicitly clarified (De Long and Summers 1991, Roper and Hewitt-Dundas 2001). The support itself can in turn be in financial or non-financial form (Denis 2004), whereas in some circumstances it is not rational to distinguish one from another.

Grant is most commonly defined as provision of non-repayable financial aid for a special purpose use. Of course, in some cases firms are also provided funds in case their usage is not (strictly) constrained. In this sense grants differ a lot from other three measures of direct public financial support (Storey and Tether 1998), i.e. loans, loan guarantees and tax reliefs for firms, the purpose of which is often the same as for grants.

The setup of public grant system should ideally be composed of individual grants, each of which is aimed at a specific policy objective. Which policy objectives should be set, is more an empirical than theoretical question, depending on the specific situation in viewed environment. Still, over-subsidization of firms that actually do not need support and subsidizing unproductive firms (due to the action of pressure groups) are threats commonly accompanying government grants (Bergström 2000). The goals of grant systems are normally outlined in strategic

documents of country or some specific field. Because of different public strategies, grant systems can vary a lot through countries (Storey and Tether 1998).

2. European Union funded firm support grants in Estonia

EU support for direct or indirect development of entrepreneurship is made available to the applicant through three main mechanisms:

1) structural aid and EU regional policy;
2) common agricultural policy;
3) fishery support.

The regional policy of EU aims to balance and unify the development of EU member states by reducing social and economic differences, which in turn should increase competitiveness of EU at world market. For the implementation of EU regional policy, structural aid is provided through following funds: European Regional Development Fund (ERDF), European Social Fund (ESF) and Cohesion Fund (CF). ERDF and ESF are structural funds. When all given three funds are aiming to increase unity, then both structural funds also aim to increase regional competitiveness and employment. In addition, ERDF aims to promote territorial cooperation in Europe.

European Council regulation No 1083/2006 lays down general rules governing three aforementioned funds for the program period of 2007-2013. For applying support from given funds in 2007-2013, three operational programmes (OP) have been composed. Those programmes define activities financed from structural funds and are:

1) OP for the Development of Economic Environment,
2) OP for Human Resource Development,
3) OP for the Development of the Living Environment.

On 11. January 2007 Estonian government approved National Strategic Reference Framework and abovementioned three OPs. In 2007-2013 Estonia gets structural funds in total of 3.4 billion EUR. Beside structural aid EU provides support in fields of agriculture, fishery and Baltic sea region cooperation. That support is accounted separately from the structural aid. The main implementing agency for structural funds concerning grants to firms is Estonian Ministry of Economic Affairs and Communications and implementing unit Enterprise Estonia.

Estonian Rural Development Plan (ERDP) 2007-2013 is directed to increase competitiveness of forestry and agriculture, improve environment and region, increase quality of life and diversify rural entrepreneurship. ERDP outlines rural life development patterns and measures to achieve them for the period 2007-2013. The ERDP, following the objectives of Common Agricultural Policy (CAP), is co-financed by Estonian government, European Agricultural Guarantee Fund (EAGF) and European Agricultural Fund for Rural Development (EAFRD). In total around 935 million euros can be used during the program period 2007-2013, whereas the

implementing agency is Estonian Ministry of Agriculture and implementing unit Agricultural Registers and Information Board.

The last group of support to firms comes from the European Fisheries Fund (EFF) and the distribution of support from that fund is set by Estonian Fisheries Strategy 2007-2013 and OP of European Fisheries Fund 2007-2013. During the program period 14 different measures, which divide between five different axes, will be financed. The implementing agency is Estonian Ministry of Agriculture and implementing unit Agricultural Registers and Information Board.

3. Empirical analysis of the characteristics of state grants

3.1. Data of state grants

Data about all grants to firms is collected from all operational programs, implementing agencies and implementing units. After the list of different grants has been created, all regulations governing the grants are collected and read through. The regulations come from Riigi Teataja database of all Estonian Acts of Law and as each measure is connected with specific regulation, the names of which will not be presented in Table 1. We consider only financial grants, i.e. support measures offering non-monetary help will not be considered. Also, in Estonia the Credit and Export Guaranteeing Foundation (KredEx) provides loan guarantees for firms, but as it is not non-refundable financial aid, it will be excluded from analysis.

Based on the available information, characteristics of different grant measures will be summarized in Table 1. The measures have been grouped according to the implementing unit. The implementing unit for grants 1-18 in Table 1 is Enterprise Estonia and for grants 19-36 Agricultural Registers and Information Board. One other grant that firms can apply was detected under implementing unit Environmental Investment Centre, namely the grant for waste collection, sorting and recycling development, but this not included in the analysis below, as this is the only grant from given implementing unit to firms and favours a very narrow spectrum of companies. Following list gives a detailed overview of collected information, the most of which has also been included in Table 1. Some grant numbers have been highlighted in the first column, meaning that those grants are provided through the same regulation. Also, sometimes the regulation has been changed in time, so e.g. at some point of time there was only one measure and afterwards several measures.

1) Operational program:
    a) MARK - OP for the Development of Economic Environment;
    b) IARK - OP for Human Resource Development;
    c) MAK - Estonian Rural Development Plan;
    d) EKF - European Fisheries Fund;
    e) EE - Estonia.

The last item in the list of operational programs is "Estonia", as at a certain point of time in the program period of 2007-2013 the EU funds meant for some measures (see Table 1) were exhausted, because of what they are currently provided from state budget funds (i.e. tax income).

2) Priority field:

a) TOUEV - Knowledge and skills for innovative entrepreneurship;
b) EVUK - Innovation and growth capabilities of firms;
c) MAK1T - 1 axis – increasing competitiveness of agricultural and forestry sector;
d) MAK3T - 3 axis – life quality and entrepreneurship diversification in rural areas;
e) EKF1T - 1 axis – adjustment of fishery fleet;
f) EKF2T - 2 axis – water cultivation, inland fishing, processing and marketing of fishery products;
g) EKF3T - 3 axis – measures offering common interest;
h) EKF4T - 4 axis – sustainable development of fishery regions.

Note that priority fields have not been given for programs which are currently financed from state budget.

3) Implementing agency:
   a) MKM - Ministry of Economic Affairs and Communications;
   b) PÕM - Ministry of Agriculture.

Grants 1-18 in Table 1 are MKM and grants 19-36 are PÕM responsibilities.

4) Implementing unit:
   a) EAS - Enterprise Estonia;
   b) PRIA - Agricultural Registers and Information Board.

Grants 1-18 in Table 1 are EAS and grants 19-36 are PRIA responsibilities.

5) Measure – name of support measure.
6) Implementation scheme:
   a) AV - open application;
   b) PR - program.

All measures in Table 1 are AV.

7) Person who can apply:
   a) EV - firm;
   b) MTÜ - non-profit association;
   c) SA - foundation;
   d) TA - research institution.

All measures in Table 1 are EV.

8) Type of grant:
   a) 0 – indirect, immaterial (counselling);
   b) 1 – indirect, material (education and training, usage of equipment, infrastructure etc.);
   c) 2 – monetary;
   d) 3 – development of technology transfer, mainly cooperation between firms and universities;
   e) 4 – financing, financial guarantee.

All measures in Table 1 are grant type 2.

9) Applicant:
   a) 0 – other than beneficiary;
   b) 1 – beneficiary firm;

For all grants in Table 1 the applicant is 1.

10) Supported activities (according to Enterprise Estonia database of support measures, „Yes“ - 1/“No“ - 0):

a) Investment – expenditure to purchase fixed assets is eligible.
b) Development activities – expenditure to promote innovation is eligible.
c) Research – purchase of research is eligible.
d) Education and training – purchase of education and training services is eligible.
e) Consulting – purchase of consulting services is eligible.

11) Supported activities reclassified to two groups ("Yes" – 1/"No" – 0):
    a) Fixed asset investment – grant is mostly designed for fixed asset investments, whereas fixed asset should be understood as it is classified in accounting regulations.
    b) Reimbursement of costs – grant is mostly designed for reimbursement of costs and fixed assets cannot be purchased.
12) Restrictions to applicant („Yes" - 1/ „No" - 0):
    a) Age
    b) Industry
    c) Owners
    d) Past financial indicators
    e) Future financial indicators
    f) Location
13) Restrictions to application:
    a) Minimum support sum (specific or range) in euros (afterwards will be converted to 1 if the minimum is over zero and to 0 if minimum equals zero).
    b) Maximum support sum (specific or range) in euros (afterwards will be converted to 1 if the maximum exists and to 0 if there is no maximum).
    c) Maximum support rate as % (specific or range) of total investment or costs (afterwards will be converted to 1 if it is below 100% and to 0 when it is exactly 100%).
    d) Budget of measure in millions of euros. *Those budgets which are highlighted and have the same number in the cell, have the same budget for different measures listed, i.e. their budgets have not been distinguished by implementing unit.*
    e) Start period, reflected by the date regulation entered into force or the date measure was opened.
    f) End period, reflected by the date measure was closed.
    g) Application form, reflected by continuous (i.e. C, continuously opened for applications) and rounds (i.e. R, opened as rounds lasting only for predetermined time).

Table 1. Overview of financial grants through different characteristics

#	Operational program	Priority field	Measure	Investment	Development activities	Research	Education and training	Consulting	Fixed asset investment	Reimbursement of costs	Age	Industry	Owners	Past financial indicators	Future financial indicators	Location	Minimum support sum (EUR)	Maximum support sum (EUR)	Maximum support rate	Budget in million EUR	Start period	End period	Application form
1	IARK	TOUEV	Start and growth grant of start-up entrepreneur	1	1	0	0	0	1	0	1	1	1	1_1	1	0_3	0	32 000	65-80%	8	08.02.08	08.07.12	C
2	EE		Start-up grant	1	1	0	0	0	1	0	1	1	1	1_1	1_2	0	0	5 000	80%	9	09.07.12		C
3	EE		Development grant	1	1	0	0	0	1	0	1	1	1	1_1	1	0	0	32 000	50%	9	09.07.12		C
4	IARK	TOUEV	Grant of involving development employee	0	1	0	0	1	0	1	0	1	0	0	0	0	0	$200\,000_3$	50-70%	8.2	29.09.08		C
5	MARK	EVUK	Export development grant	0	1	1	0	0	0	1	0	1	0	0	0	0	1 000	160 000	30-70%	42.6	17.02.08	07.12.12	C
6	MARK	EVUK	Tourism marketing grant for the entrepreneurs	0	1	0	0	1	0	1	0	1	1	0	0	0	19 170	96 000	50%	3	23.05.08	23.02.12	C
7	MARK	EVUK	Innovation voucher grant	0	1	1	0	1	0	1	0	1	1	1_1	0	0	0	4 000	100%	2.9	07.02.09		C
8	IARK	TOUEV	Development of knowledge and skills grant	0	0	0	1	1	0	1	0	1	1	0	0	0	1 600	64 000	$50\%_4$	12.3	29.06.08	22.11.11	C
9	IARK	TOUEV	Development of knowledge and skills, training share grant	0	0	0	1	1	0	1	0	1	1	1_1	0	0	0	959	100%	12.3	26.07.09	06.11.10	C
10	IARK	TOUEV	Industrial entrepreneur counselling grant	0	0	0	1	1	0	1	0	1	1	0	0	0	1 600	5 000	$50\%_4$	12.3	22.07.11		C
11	IARK	TOUEV	Diagnostics of production management grant	0	0	0	1	1	0	1	0	1	1	0	0	0	0	500	100%	12.3	22.07.11		C

12	IARK	TOUEV	Design counselling grant	0	0	0	1	1	0	1	0	1	1	0	0	0	1 600	5 000	50%$_4$z	0.5	20.01.12		C
13	MARK	EVUK	Grant of research and development projects	1	1	1	0	1	0	1	0	0	1	0	0	0	0	3 200 000	35-75%	56.3	25.05.08	05.03.12	C
14	EE		Manufacturing firm development grant	1	1	1	0	1	1	0	0	1	1	1$_1$	0	0	10 000	500 000	35%	10	06.03.12		C
15	MARK	EVUK	Tourism product development grant	1	1	0	0	0	1	0	0	1	1	0	0	0	1 910 000	3 200 000	30%	5.1	29.08.08	25.03.09	R
16	MARK	EVUK	Tourism product development grant for small projects	1	1	0	0	0	1	0	0	1	1	0	0	0	63 000	640 000	40-50%	11.5	29.08.08	01.02.10	C
17	MARK	EVUK	Technology investment grant for industrial undertakings	1	0	0	0	0	1	0	0	1	1	0	0	0	12 600	3 200 000	40%$_4$	54.8	15.06.08	30.04.10	R
18	MARK	EVUK	Technology investment grant for industrial undertakings (large investors and subcontractors)	1	0	0	0	0	1	0	0	1	1	0	0	0	63 000	1 000 000$_3$	25%	18.8	01.02.10		C
19	MAK	MAK1T	1.2 Grant for young entrepreneur's agricultural start-up	1	1	0	0	0	1	0	1	1	1	0	1	0	0	40 000	50%	11.8/17.6$_5$	18.06.10		R
20	MAK	MAK1T	1.3 Grant for counselling system	0	0	0	0	1	0	1	0	1	0	0	0	0	0	1 279	75-80%	3/4$_5$	17.04.10		R
21	MAK	MAK1T	1.4.1 Investment grant for agricultural micro firm	1	1	0	0	0	1	0	1	1	1	1	0	1	0	100 000	35-60%	99.2	13.09.10		R
22	MAK	MAK1T	1.4.2 Investment support for cattle breeding building	1	1	0	0	0	1	0	1	1	0	1	0	1	0	500 000	40-60%	64.5	30.08.10		R
23	MAK	MAK1T	1.4.3 Investment support for bioenergy production	1	1	0	0	0	1	0	1	1	0	1	0	1	0	512 000	40-60%	25.3	26.07.10		R
24	MAK	MAK1T	1.5.2 Grant for providing value added to forestry products	1	1	0	0	0	1	0	1	1	1	1	0	1	0	200 000	25-50%	6.8	24.04.10		R
25	MAK	MAK1T	1.6(.1) Grant for giving value added to agricultural and non-wood forestry products	1	0	0	0	0	1	0	1	1	0	1	0	0	0	1 920 000	50%$_4$	38.4	06.08.10		R

26	MAK	MAK1T	1.6.2, 1.6.3 Investment grant for common production and marketing of agricultural products, conforming with new challenges in dairy and organic farming sectors	1	0	0	0	0	1	0	1	1	0	1	0	0	0	1 920 000	50%	4.6	13.06.11		R
27	MAK	MAK1T	1.7.1 Grant for supporting cooperation in developing new technologies in agriculture, food and forestry sectors	0	1	1	0	0	0	1	1	1	0	1	0	0	0	320 000	35-80%[4]	6.5	26.03.10		R
28	MAK	MAK3T	3.1 Grant for diversifying rural entrepreneurship (small projects)	1	0	0	0	0	1	0	1	1	0	1	1[2]	1	0	100 000	30-50%	71.4	23.03.08		R
29	MAK	MAK3T	3.1 Grant for diversifying rural entrepreneurship (large projects)	1	0	0	0	0	1	0	1	1	0	1	1	1	100 000	300 000	30-50%	71.4	21.11.08		R
30	MAK		4. LEADER measure	1	1	0	0	0	1	0	0	0	0	0	0	1	0	200 000	40-60%	77.2	03.10.10		R
31	EKF	EKF1T	1.3 Grant for investment on board of fishing boats and selectivity	1	0	0	0	0	1	0	0	1	0	0	0	0	0	639 117	40%	20.4	29.03.09		R
32	EKF	EKF1T	1.4 Grant for small scale seaside fishing	1	1	0	0	0	1	0	0	1	0	0	0	0	0	42 614	60%	20.4	10.04.09		R
33	EKF	EKF2T	2.1 Grant for investing in aquaculture	1	0	0	0	0	1	0	0	1	0	0	1	0	0	1 022 586	50%	32.8	23.05.08		R
34	EKF	EKF2T	2.2 Grant for inland fishing	1	1	0	0	0	1	0	0	1	0	0	0	0	0	139 362	40-60%	32.8	18.12.09		R
35	EKF	EKF2T	2.3 Grant for investing in processing and marketing	1	1	0	0	0	1	0	0	1	0	1	1	0	0	639 116	50%	32.8	05.07.08		R
36	EKF	EKF4T	4.1 Grant for sustainable development of fishery regions	1	1	0	1	0	1	0	0	1	0	1	1	1	0	383 470	40-75%	25.7	10.05.08		R

Source: compiled by authors.

[1] - Applicant must be SME

[2] - Restrictions connected with number of jobs

[3] - Conditions have changed in time

[4] - Smaller in case of large firm

[5] - According to different sources

3.2. Analysis of state grants

The statistics about supported activities and restrictions on applicant/application have been provided in Table 2. Results are presented over all 36 grant measures and also through each implementing unit (i.e. for EAS and PRIA) separately. The analysis is conducted by using just the number of different measures (n=36), but also weighing all measures with their budget share from total budget of studied measures, this also on the example of both implementing units separately. When budgets of measures are accounted, the share of each activity or restriction tells exactly its importance among all support measures.

The number of grants supporting investment and development activities is the highest (69% and 67% of all grants respectively), whereas research and education/training are lagging behind remarkably (14% and 17% of all grants). The binary classification of supported activities confirms previously given results, as around two thirds of all grants favor fixed asset investments and remaining one third reimburse costs. When considering the budgets of specific measures, the shares are even more shifted in favor of investments (89%) and fixed assets investments (82%). So, the first important conclusion is that firm support grants in Estonia are strongly investment oriented, which probably could be linked to the fact that investments are expected to create results desired in policies more likely. When coming to EAS and PRIA, then EAS measures favor non-investment activities in a remarkably higher amount than PRIA measures, and it could even be said that the presence of non-investment measures is mostly determined by EAS measures.

The results are more divergent when coming to the restrictions side of analysis. Practically all measures have maximum support sum and maximum support rate restrictions, but on the contrary, minimum support sum restriction has remarkably lower representation. Given restrictions can prevent very large investments and firms must have sufficient self-financing available (which of course can be composed of borrowed resources). The share of location restriction applies for 50% of total grants when budgets are accounted, meaning more specifically that regional uniformity is targeted by funding activities outside Estonian capital. Around half of the measures set requirements for past financial performance and around a quarter to future financial expectations when budgets are considered, whereas PRIA's restrictions are about as twice more frequent than for EAS. Around half of the grants have age and ownership restrictions when budgets are considered, whereas for age the limitations come mostly from PRIA measures (mainly minimum operational time required) and for ownership the limitations mostly come from EAS measures. The last variable "industry" is constrained for most of the measures, but this is also logical as implementing units EAS and PRIA fulfill the tasks of different operational programs, therefore being focused on a limited range of industries.

In summary it can be said, that Estonian entrepreneurship grants distributed from EU funds mostly favor investment in fixed assets and are characterized by rather high amount of constraints to grant applicant and application.

Table 2. Statistics of supported activities and restrictions by grants.

	Investment	Development activities	Research	Education and training	Consulting	Fixed asset investment	Reimbursement of costs	Age	Industry	Owners	Past financial indicators	Future financial indicators	Location	Minimum support sum (EUR)	Maximum support sum (EUR)	Maximum support rate
Total number of grants supporting specific activity or having given restriction	25	22	5	6	11	24	12	13	34	19	17	9	8	11	36	33
Share	69%	61%	14%	17%	31%	67%	33%	36%	94%	53%	47%	25%	22%	31%	100%	92%
Share when considering grant budgets	89%	69%	16%	5%	13%	82%	18%	48%	82%	43%	54%	22%	50%	23%	100%	99%
EAS total number of grants supporting specific activity or having given restriction	9	11	4	5	10	8	10	3	17	16	6	3	0	10	18	15
EAS share	50%	61%	22%	28%	56%	44%	56%	17%	94%	89%	33%	17%	0%	56%	100%	83%
EAS share when considering grant budgets	71%	64%	46%	5%	38%	48%	52%	7%	77%	79%	13%	7%	0%	65%	100%	98%
PRIA total number of grants supporting specific activity or having given restriction	16	11	1	1	1	16	2	10	17	3	11	6	8	1	18	18
PRIA share	89%	61%	6%	6%	6%	89%	11%	56%	94%	17%	61%	33%	44%	6%	100%	100%
PRIA share when considering grant budgets	98%	71%	1%	5%	1%	98%	2%	68%	84%	25%	74%	30%	75%	3%	100%	100%

Source: compiled by authors.

Followingly, EAS and PRIA measures are compared in respect of supported activities and restrictions. As all values for variables are binary (i.e. 0 or 1), Cramer's V test is being used to find out whether grants from two implementing units differ. The results are summarized in Table 3.

Table 3. Analysis whether supported activities and restrictions are different through two implementing units (i.e. EAS and PRIA).

Variable	Cramer's V	Approx. Sig.
Investment	0.422	0.011*
Development activities	0.000	1.000
Research	0.241	0.148
Education and training	0.298	0.074**
Consulting	0.543	0.001*
Fixed asset investment	0.471	0.005*
Reimbursement of costs	0.471	0.005*
Age	0.405	0.015*
Industry	0.000	1.000
Owners	0.723	0.000
Past financial indicators	0.278	0.095**
Future financial indicators	0.192	0.248
Location	0.535	0.001*
Minimum support sum (EUR)	0.543	0.001*
Maximum support sum (EUR)	not calculated, constant	
Maximum support rate	0.302	0.070**

* significant at 0.05 level
** significant at 0.1 level
Source: compiled by authors.

It can be seen that grants from two implementing units (both having 18 different grants in database) are rather different in their setup. Namely, 7 variables out of 16 studied are different at 0.05 level and 10 out of 16 at 0.1 level. So around half of the criteria viewed are significantly different. This in turn will raise an important question, whether supported activities and restrictions are methodologically and empirically grounded. For instance manufacturing in the sense of processing agricultural or non-agricultural products are not so different industrial fields that their support measures should substantially differ. The answer to given question needs additional specific analysis, which could be conducted in future studies.

The last part of analysis indicates that measures focused either on fixed asset investments or reimbursement of costs, are rather different in respect of restrictions (see Table 4). Namely, five of the nine variables tested are significantly different on at least 0.1 level. For all significantly different variables, measures focusing on fixed asset investments have remarkably higher share of restrictions, whereas on some

occasions measures focused on reimbursement of costs do not have restrictions at all.

Table 4. Analysis whether restrictions are different through measures focused either on fixed asset investments or reimbursement of costs.

Variable	Cramer's V	Approx. Sig.
Age	0.409	0.014*
Industry	0.086	0.607
Owners	0.197	0.238
Past financial indicators	0.315	0.059**
Future financial indicators	0.408	0.014*
Location	0.378	0.023*
Minimum support sum (EUR)	0.171	0.306
Maximum support sum (EUR)	not calculated, constant	
Maximum support rate	0.426	0.011*

* significant at 0.05 level
** significant at 0.1 level
Source: compiled by authors.

Conclusion

State grants are designed to achieve some objective of economic policy, which can for instance be addressing some market failures or increasing specifically some target figure (e.g. economic growth, employment, export). Current paper aimed to study whether government grant system to support firms is shifted towards supporting special types of firms rather than allowing a wide range of firms to get support.

For current study all Estonian grants to firms in the program period of 2007-2013 and financed through EU funds were included in analysis, totaling at 36 different grant measures. The analysis of grants showed that they tend to favor investment activities, but what concerns the restrictions to applicant and application the situation highly varies. When for some variables (e.g. industry, maximum support sum, maximum support rate) majority of the total budget of grants is connected with restrictions, then for others (e.g. future financial indicators, minimum support sum) most of it is without restrictions, still the majority of viewed restrictions existing for around half of the total budget of grants. The grant measures in two implementing units were found to have a lot of differences in respect of activities supported and restrictions. Also, measures focusing on fixed asset investments have remarkably more restrictions when compared with measures focused on reimbursement of costs.

References

1. Agricultural Guarantee Fund (EAGF). (2012) [http://ec.europa.eu/agriculture/cap-funding/index_en.htm] Retrieved: 5.02.2013.
2. Agricultural Registers and Information Board. (2013) [www.pria.ee] Retrieved: 5.02.2013.
3. **Bergström, F.** (2000) Capital Subsidies and the Performance of Firms. Small Business Economics, Vol. 14, No. 3, pp. 183-193.
4. Cohesion Fund (CF). (2012) [http://ec.europa.eu/regional_policy/thefunds/cohesion/index_en.cfm] Retrieved: 5.02.2013.
5. Common Agricultural Policy (CAP). (2012) [ec.europa.eu/agriculture/cap-overview/2012_en.pdf] Retrieved: 5.02.2013.
6. Credit and Export Guaranteeing Foundation (KredEx). (2013) [www.kredex.ee] Retrieved: 5.02.2013.
7. **De Long, J. B., Summers, L. H.** (1991) Equipment Investment and Economic Growth. The Quarterly Journal of Economics, Vol. 106, No. 2, pp. 445-502.
8. **Denis, D. J.** (2004) Entrepreneurial finance: an overview of the issues and evidence. Journal of Corporate Finance, Vol. 10, No. 2, pp. 301-326.
9. Enterprise Estonia. (2013) [www.eas.ee] Retrieved: 5.02.2013.
10. Environmental Investment Centre. (2013) [www.kik.ee] Retrieved: 5.02.2013.
11. Estonian Fisheries Strategy 2007-2013. (2007) [http://www.agri.ee/?id=52022] Retrieved: 5.02.2013.
12. Estonian Rural Development Plan (ERDP). (2009) [http://www.agri.ee/rdp] Retrieved: 5.02.2013.
13. European Agricultural Fund for Rural Development (EAFRD). (2012) [http://europa.eu/legislation_summaries/agriculture/general_framework/l60032_en.htm] Retrieved: 5.02.2013.
14. European Council regulation No 1083/2006. (2006) [eur-lex.europa.eu] Retrieved: 5.02.2013.
15. European Fisheries Fund (EFF). (2012) [http://ec.europa.eu/fisheries/cfp/eff/index_en.htm] Retrieved: 5.02.2013.
16. European Regional Development Fund (ERDF). (2012) [http://ec.europa.eu/regional_policy/thefunds/regional/index_en.cfm] Retrieved: 5.02.2013.
17. European Social Fund (ESF). (2012) [http://ec.europa.eu/esf/home.jsp] Retrieved: 5.02.2013.
18. National Audit Office of Estonia. (2010) The impact of the state's enterprise supports on the competitiveness of Estonian economy. Does the state support its enterprises in the best way? Tallinn: 126 p.
19. National Strategic Reference Framework. (2007) [http://www.struktuurifondid.ee/nsrf-2007-2013] Retrieved: 5.02.2013.
20. OP for Human Resource Development. (2007) [http://www.struktuurifondid.ee/op-human-resource-development/] Retrieved: 5.02.2013.

21. OP for the Development of Economic Environment. (2007) [http://www.struktuurifondid.ee/op-development-of-economic-environment/] Retrieved: 5.02.2013.
22. OP for the Development of the Living Environment. (2007) [http://www.struktuurifondid.ee/op-development-of-the-living-environment/] Retrieved: 5.02.2013.
23. OP of European Fisheries Fund 2007-2013. (2007) [http://www.agri.ee/ekf] Retrieved: 5.02.2013.
24. Riigi Teataja database. (2013) [www.riigiteataja.ee] Retrieved: 5.02.2013.
25. **Roper, S., Hewitt-Dundas, N.** (2001) Grant assistance and small firm development in Northern Ireland and the Republic of Ireland. Scottish Journal of Political Economy, Vol. 48, No. 1, pp. 99-117.
26. Statistics Estonia. (2013) [www.stat.ee] Retrieved: 5.02.2013.
27. **Storey, D. J., Tether, B. S.** (1998) Public policy measures to support new technology-based firms in the European Union. Research Policy, Vol. 26, No. 9, pp. 1037-1057.

THE DYNAMICS AND DETERMINANTS OF SOCIAL CAPITAL IN THE EUROPEAN UNION AND NEIGHBOURING COUNTRIES[1]

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Abstract

This empirical study investigates the dynamics and the determinants of social capital in Europe over the period 1990-2008, using empirical data from EVS. Methodologically, factor analysis and regression analysis are implemented. The analysis covers 20 Western-European countries, 10 new member states and 15 EU neighbouring countries. Comparison of the levels of social capital showed that, with few exceptions, the levels of social capital are lower in Eastern Europe as compared to the old member states in Western Europe. Regression results of the determinants of social capital showed that most influential factors of social capital are education and satisfaction with democracy. It follows that investments in educational system and improving democratization processes could increase the level of social capital as an important factor of economic development.

Keywords: Social capital, Europe, old and new member states, neighbouring countries

JEL Classification: A13, O52, P20, Z13

Introduction

In current times of after-crisis, all countries are looking for remedies for how to renew the economic growth process and to cure the negative outcomes of the crisis in terms of decreased welfare and employment levels, increased uncertainty and pessimism, etc. Social capital is considered as one of the factors of economic development, which increases economic efficiency at national level through supporting cooperation and lowering transaction costs. At the level of individuals, social capital in could provide alternative forms of resilience at difficult times, including strengthening of social and family networks and community practices to foster solidarity when confronted by crises. Empirically, it has been shown that regions and countries with relatively high stocks of social capital seem to achieve higher levels of innovation and growth, as compared to societies of low trust and civicness (e.g. Knack and Keefer 1997, Ostrom 1999, Rose 1999, Kaasa 2009). In broader terms it can be said that social capital is like a "glue" to hold society together, to embrace socially active multilevel networks and practices, norms and values which have an impact on trust and relations among individuals, and also between individuals and the state. Conscious enhancement of social capital makes it

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possible to reduce risks in society as well as instill confidence into citizens that expected long-term positive results of reforms in times of crisis will outweigh short-term cuts in state budget and welfare provision. Especially trust – both institutional trust and generalized trust – are essential factor for carrying out changes and reforms necessary to overcome the crisis.

However, the levels of social capital tend to decrease in times of crisis. Also, there is evidence that the levels of social capital are lower in new member states and neighbouring countries as compared to old EU members. As such, the lack of social capital may be an important development obstacle in less-developed regions of Europe. Therefore, it is important to analyze the changes in the levels of social capital during the crisis, and specific reasons behind the (expectedly) decreased levels of social capital, which tend to lead to lower economic growth rates at national level and hamper citizens' resilience at the individual level.

Current study aims to compare the levels and dynamics of social capital in EU member state, and to examine the determinants of social capital comparatively in three country groups – old and new member states, and neighbouring countries – in order to find out whether there are differences between country groups regarding social capital formation. Additionally, specific reasons for lower level of social capital in Eastern European countries with communist background would be explored. Information obtained from this study could help to understand future developments regarding the possible changes in the levels of social capital in NMS-s and NC-s, and to formulate activities and policies which may lead to faster recovery from crisis and higher prosperity in these regions.

1. Theoretical background

Social capital, in its broadest sense, refers to the internal social and cultural coherence of society, the trust, norms and values that govern interactions among people and the networks and institutions in which they are embedded (Parts 2009). As an attribute of a society, social capital can be understood as a specific characteristic of social environment that facilitates people's cooperation. The key idea of this argument is that communities can provide more effective and less costly solutions to various principal-agent and collective goods problems than can markets or government interventions (Durlauf 2004). Also, social capital helps to reduce transaction costs related to uncertainty and lack of information. As such, it can be said that social capital gives "soft", non-economic solutions to economic problems.

Theoretical literature mostly agrees that social capital consists of different components, which are more or less interrelated. The elements of social interaction can be divided into two parts: structural aspect, which facilitates social interaction, and cognitive aspect, which predisposes people to act in a socially beneficial way. The structural aspect includes civic and social participation, while the cognitive aspect contains different types of trust and civic norms, also referred to as trustworthiness. Although there has been some inconsistency concerning the relative importance of the cognitive and structural aspects of social capital, it could be

assumed that these two sides of the concept work interactively and are mutually reinforcing. For example, informal communication teaches cooperative behavior with strangers in order to achieve shared objectives, and the importance of common norms and related sanctions necessary to prevent opportunistic behavior. Another important outcome of being involved in different types of networks is that personal interaction generates relatively inexpensive and reliable information about trustworthiness of other actors, making thus trusting behavior less risky. On the other hand, pre-existing generalized, diffused interpersonal trust indicates the readiness of an actor to enter into communication and cooperation with unknown people. Based on these relationships, it could be shortly summarized that social interaction requires communication skills and trust, which, in turn, tend to increase through interpersonal collaboration. Therefore, various dimensions of social capital should be taken as complements, which all are related to the same overall concept of social capital. (Parts 2009)

In order to design policies which help to increase the levels of social capital, one should first know which factors determine these levels. The determinants of social capital can be divided into two groups:

- The psychological and socio-economic characteristics of individuals such as personal income and education, family and social status, values and personal experiences, which determine the incentive of individuals to invest in social capital.
- Contextual or systemic factors at the level of community/nation, such as overall level of development, quality and fairness of formal institutions, distribution of resources and society's polarization, and prior patterns of cooperation and trust.

Current study focuses on the individual-level determinants of social capital[3], which are empirically studied, for example, by Alesina and Ferrara (2000), Van Oorschot and Arts (2005), Christoforou (2005), Halman and Luijkx (2006), Kaasa and Parts (2008), and others. Although the results of these empirical studies are not always uniform, some generalizations can be made concerning the determinants of different types of social capital.

Firstly, income and education seem to be most influential socio-economic factors of social capital. Empirical evidence shows that higher levels of income and education coincide with a strong probability for group membership and interpersonal trust from the part of individual (Knack and Keefer 1997, Denny 2003, Helliwell and Putnam 1999, Paldam 2000, and others). However, the exact causal mechanism behind this relationship is not clearly explained in the literature. For example, trust could be a product of optimism (Uslaner 1995, 2003) generated by high or growing incomes. Economic recession is expected to reduce optimism and thus also to decrease the level of institutional trust. Similarly, education may strengthen trust and civic norms, if learning reduces uncertainty about the behaviour of others, or if students are taught to behave cooperatively (Offe and Fuchs 2002, Soroka *et al.*

[3] These national-level determinants of social capital remain outside the scope of the current study, but they constitute likely part of the future research on this topic.

2003). These processes can be self-reinforcing: if individuals know that higher education levels make others more likely to be trusting (and perhaps also more trustworthy), then they are in turn more likely to trust others (Helliwell and Putnam 1999). This implies that the returns to trusting behaviour are higher when the average levels of education increase. At the more general level, it has been suggested that both formal and informal education act as mediators of social values and norms between human generations (Montgomery 2000). It appears that such value transmission should not always be supportive to social capital generation – education may foster individualistic and competitive attitudes and hence reduce the motivation for cooperation.

As regards to a positive relationship between education, income and participation in community and voluntary activities, there is no simple answer to the question what makes more educated individuals to participate and volunteer more often. One possibility is to consider volunteering as a consumption good, which increases one's non-material well-being and is influenced by the opportunity cost of consumption of this good (Brown and Lankford 1992). Since higher education is associated with a higher opportunity cost of time (equal to foregone earnings), negative effect of education on volunteering could be expected. However, volunteering usually takes place out of work time, so there may be little or no trade-off. Among other explanations, there is a possibility that participation activity, education and wages may be determined by common omitted factors. For example, some personal traits, such as openness, activity, curiosity and responsibility, ensure higher education and wage, and are prerequisites for active participation in community life at the same time.

Education and income are also often related to person's employment status. Oorschot *et al.* (2006) have shown that the negative effect of unemployment holds for a wide range of social capital components, whereas the effect is stronger in case of indicators of formal participation and weaker on general trust.

Besides income and education, several other social and demographic determinants like age, gender, marital status, number of children, and others seem to be important in determining social capital. However, these factors are less studied than aforementioned and also the empirical results and their explanations are varying (see, for example, Christoforou 2005, Fidrmuc and Gërxhani 2005, Halman and Luijkx 2006). Shortly summarizing, most models show positive impact of age on trust and formal networks, although there is also great support for non-linear relationship. Concerning gender, men tend to have significantly higher participation levels in formal networks. Women, instead, have more family-based social capital, they are more trustworthy and accept more likely social norms. At the same time, trust – especially institutional trust – has not been found to be much influenced by gender. Further, usually it is expected that married couples have less social capital than on average, as family life takes time and decreases the need for outside social relations (Bolin *et al.* 2003). Theoretically, having children could be expected to have a similar effect as marriage, but empirical evidence is not so clear.

Some studies have also tested the impact of town size on the components of social capital. The results illustrate the effect of physical distance and possible anonymity on the pattern of socializing: on the one hand, living in a small or medium-sized town tend to decrease both formal and informal participation (Fidrmuc and Gërxhani 2005), while Alesina and Ferrara (2000) show to the contrary that people have less informal social contacts in larger settlements.

Finally, religiosity might influence social capital, mostly increasing informal networks, social norms and institutional trust but lowering general trust (which is replaced with trust in god). However, belonging into different religious denominations could give different results – it is believed that trust is lower in countries with dominant hierarchical religions like Catholic, Orthodox Christian or Muslim (Putnam et al 1993, La Porta et al 1997), while Protestantism associates with higher trust (Inglehart 1990, Fukuyama 1995) and norms (van Oorschot et al 2006). Similarly to religious doctrines, communist rule can be considered as an example of the effect of ideology. In general, an ideology can create social capital by forcing its followers to act in the interests of something or someone other than himself (Knack and Keefer 1997, Whiteley 1999).

Summing up, empirical analysis in the second part of the paper would be rather explorative, as there is not much uniform evidence concerning the effect of several social capital determinants, especially when distinguishing between country groups with different economic and historical backgrounds.[4]

Next, the specific features of social capital in post-communist countries are investigated. More specifically, following literature overview[5] focuses on the possible reasons why the levels, sources and also outcomes of social capital might be different in Central and Eastern European (CEE) post-communist countries, as compared to other European societies with longer tradition of market economy and democracy. Generally, it has been suggested that the main reason of the low levels of social capital in CEE countries is related to the legacy of communist past, post-communist transformation processes and backwardness in social development. More specifically, following aspects could be highlighted:

- Firstly, transition produces uncertainty which tends to decrease a sense of optimism about the future, as people do not feel that they have control over their own destinies – this, in turn, leads to lower generalized trust (Uslaner 2003).
- Secondly, post-communist transition resulted in a rapid destruction of dominant values (like ideological monism, egalitarianism, and collective property) and habits, the process which stimulates development of cynism and opportunism

[4] It should be noted that most previous analyses have paid no attention to the possible differences in social capital determinants in different countries. There are only few exceptions (i.e. Fidrmuc and Gërxhani 2005, Kaasa and Parts 2008, Parts 2009), but no solid conclusions can be drawn on the basis of so few studies.

[5] More detailed insight into studies about social capital in CEE countries can be found in Badescu and Uslaner (2003).

and thus creates negative social capital. (Štulhofer 2000) Another result of the value changes is that transformation societies are becoming more individualized: traditional family life is breaking down and individuals become more isolated in society.

- Thirdly, transition economies are usually characterized by high levels of poverty and unemployment, competition at the workplace, and strong primary concern for the family, which do not create a good environment for mutual trust among people, for rebuilding social ties and networks of cooperation (Bartkowski 2003).
- Fourth, social capital and cohesion are negatively affected by unequal income distribution, which resulted from destruction of the old state-sector middle class, before a new middle class could be established. Uslaner (2003: 86) suggests that links between the increase of economic inequality and the low levels of generalized trust may be different in the transitional countries compared to the West, because in former the past equality was not the result of normal social interactions and market forces, but rather enforced by the state.

Another set of explanations of the low trust and participation levels is directly related to the communist past of these countries. Perhaps most fundamental is that communism taught people not to trust strangers – the encompassing political control over daily life presented people with the acute problem of whom to trust and how to decide whether intensions of others were honest. Flap and Völker (2003) explain how people created niches in their personal networks consisting of strong ties to trustworthy others, which allowed an uncensored exchange of political opinions and which provided social approval. At the same time, weak provision networks existed, but these were based solely on economic shortage in command economy and did not evolve a basis for mutual trust. (Ibid) Rose et al (1997) explain the low trust levels as a result of an "hour-glass society" in which the population was divided into two groups – ordinary people and privileged "nomenclature" – both having strong internal ties at the level of family and close friends within the group but little interaction with other group. Therefore the social circles in transition economies would seem to be smaller and more closed than in market economies, where the positive association between social networks and generalised trust is higher (Raiser *et al* 2001). Similar explanations hold for low levels of organisational membership (see Howard 2003, Gibson 2003).

Explanations of the low level of institutional trust are also complicated. In transition economies, where institutional and political frameworks are only being constructed and changes in the political situation affects quite strongly the trust in institutions, the trust may vary significantly without showing a clear patterns of relationships to the quality of institutional settings and economic performance (Mateju 2002). Although most of the European post-communist states have democratic constitutions and institutions, the Western model of democracy which posits a trusting and active citizenry is not well established in these countries (Badescu and Uslaner 2003). As an example, although a high percentage of people vote in national elections in the transition countries, most voters distrust the politicians and parties for whom they

have voted. This suggests that the culture of the new political elite is often not supportive of building bridges between society and its political institutions.

Interestingly, Uslaner (2003) points out that what separate transition and non-transition societies is largely the people's interpretation of their prior experiences under communism, not psychology. The regimes are very different and this clearly affects both trust and civic engagement, but the differences in regimes work through the same underlying motivations for trusting others and taking part in civic groups. As such, although the trend of low trust and nonparticipation throughout post-communist Europe is unlikely to change rapidly, three are still possible mechanisms for improvement (Howard (2002, pp. 166-167):

1) Generational change – young post-communist citizens are less influenced by the experience of life in a communist system. However, this result is not certain, as socialization comes not only from the current institutional setting, but also from one's parents, teachers, and peers who still have strong personal experience of the communist past.
2) More active and supportive role on the part of the state, with notion that this support should be selective, as not all kind of organizations are beneficial for democracy and overall wellbeing.
3) Improving economic conditions – raising the actual standards of living of most ordinary people, so that they might have the economic means to be able to devote some time and energy to voluntary organizations, and possibly to contribute a donation or membership fee.

Based on the above, it can be suggested that policies aiming to shape individual experiences so as to increase trust and civic engagement are possible in post-communist societies. Even if the preciousness of social capital in respect of achieving alternative development objectives is the subject of further investigation, completion of transformation processes and improvements in social development are expected to favour also increase in the levels of social capital in NMS and several less developed neighbouring countries.

2. Data and methodology

Empirical part of the current study covers both European Union member states and as many neighbouring countries as possible. As one of the aims of this study was to highlight the particular features of social capital in post-communist countries, total sample was divided into three groups of countries: (i) Western European countries (WE)[6] including 15 "old" EU members plus 5 other countries from the region, (ii) new member states (NMS)[7] including 10 post-communist countries from Central

[6] Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Great Britain

[7] Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, Slovenia

and Eastern Europe (CEE) plus Cyprus and Malta, and (iii) 15 neighbouring countries (NC)[8], mostly from CIS and Balkan.

The data about social capital were drawn from the European Values Study (EVS, 2010). For the analysis of the determinants of social capital, the data from the latest wave were used: for most countries the indicators pertain to the year 2008, except for Belgium, Finland, the United Kingdom, Iceland, Italy, Sweden, and Turkey (2009). In order to analyse the dynamics of social capital over time, the latest data were compared to those of year 1990. As many European countries outside EU were not included in the earlier rounds of EVS survey, the analysis of the changes in social capital levels covers less countries – 14 from WE and 10 NMS.

As social capital is a multifaceted concept, it can be best described by different dimensions instead of one overall index. Based on the theoretical considerations and also the availability of certain social capital data for as many European countries as possible, it was reasonable to distinguish between four components of social capital – general trust, institutional trust, social norms and formal networks. Altogether, 12 initial indicators were extracted from EVS survey. In order to ensure the correct interpretation of the results, the scales were chosen so that larger values reflect a larger stock of social capital. Then, latent variables of social capital were constructed using confirmatory factor analysis. The results of the factor analysis are presented in Appendix 1. The percentages of total variance explained by the factors range from 52.76% to 81.43% and Kaiser-Meyer-Olkin (KMO) measures indicate the appropriateness of the factor models (values of the KMO measure larger than 0.5 are usually considered as acceptable). The country mean factor scores of social capital can be found in Appendix 2.

Next, country mean factor scores were calculated and the levels of social capital in 1990 and 2008 were compared. Finally, regression analysis was conducted in order to investigate and compare the determinants of social capital in all three country groups.

Concerning the determinants of social capital, this study covers only individual-level determinants of social capital, which are divided into two broader categories: 1) socio-demographic factors like gender, age, income, education, employment and marital status, number of children and town size; and 2) cultural and psychological factors including individualism, satisfaction with democracy and religiosity. All these indicators are also taken from the latest wave of EVS. Exact descriptions of these indicators together with measurement details can be found in Appendix 3.

3. Empirical results and discussion

Based on the individual-level factors of social capital components, country mean factor scores were calculated and saved as variables for further analysis (see

[8] Albania, Azerbaijan, Armenia, Bosnia-Herzegovina, Belarus, Croatia, Georgia, Moldova, Montenegro, Russian Federation, Serbia, Turkey, Ukraine, Macedonia, Kosovo

Appendix 2). Comparison of the levels of social capital showed that in case of all social capital components, the levels were lower in NMS as compared to WE. However, in less developed NC-s institutional trust and social norms appeared to be stronger than in NMS, but lower than in WE (see Table 1).

Table 1. Mean factor scores by country groups

Country group	Year	General trust	Institutional trust	Formal networks	Social norms
WE	1990	0.247	0.068	0.094	0.016
	2008	0.261	0.157	0.199	0.098
NMS	1990	-0.178	-0.090	-0.066	-0.003
	2008	-0.244	-0.252	-0.194	-0.130
NC	2008	-0.212*	0.055	-0.209	0.036

Source: author's calculations. * Without Belarus and Azerbaijan which have exceptionally high levels of general trust, the average of NC-s is -0.285.

The results support previous findings that in post-communist countries institutional trust may not be related to the institutional quality which is expectedly higher in NMS than in NC. It can be suggested that in NMS-s citizens are more demanding for institutions and democratization because of more explicit comparisons with WE countries, and thus stand more critically to the decisions of institutions.

Next, the levels of social capital in 1990 and 2008 were compared. Based on the availability of the data, this analysis covered 14 Western-European countries and 10 new member states. In general, the average level of social capital has creased in NMS and increased in WE during the period 1990-2008. However, the experiences of individual countries were rather diverse concerning the changes in different components of social capital, so no strong generalisations can be made on the basis of country groups. Unfortunately there were no data of social capital changes for NC-s, but based on recent historical experience of NMS-s, there is a possibility that institutional trust and acceptance of social norms would decrease in neighbouring countries when overall economic situation improves, as it has happened in new member states. In this situation, it is highly important to ensure the effectiveness and fairness of formal institutions when implementing economic and political reforms, in order to withstand possible decrease in institutional trust.

At the final stage of empirical analysis, regression analysis was conducted in order to investigate the determinants of social capital. The results from pooled sample are presented in Table 2. It appeared that most influential factors of social capital are education and satisfaction with democracy. Therefore, investments in educational system and improving democratisation processes could increase the level of social capital. Social capital also associates positively with age, income, and having children, while there was negative relationship between social capital, town size and individualism.

As can be seen, some of the factors analysed could not be easily affected by policies, while encouraging overall economic and social development would give contrary results: growing incomes and population ageing tend to increase social capital, while spreading individualism might decrease social capital.

Table 2. The results of the regression analysis (standardized regression coefficients, pooled sample)

Independent variables	Dependent variable			
	General trust	Institutional trust	Formal networks	Social norms
gender	0.04***	0.01	-0.02**	0.05***
age	0.08***	0.02***	0.00	**0.16*** **
income	0.08***	0.04***	0.08***	0.01
education	**0.12*** **	0.02**	**0.11*** **	-0.01
unemployed	-0.03***	-0.01	-0.01	0.01**
relationship	0.00	-0.01**	0.02***	-0.05***
children	0.00	0.03***	0.03***	0.04***
size of town	0.00	-0.03***	-0.06***	-0.03***
individualism	-0.08***	-0.01*	-0.07***	0.01
democracy	**0.12*** **	**0.49*** **	0.04***	0.04***
religiosity	-0.03***	0.03***	0.03***	0.09***
CEE	-0.02	-0.08***	-0.06***	-0.20***
NC	-0.05*	0.06**	-0.07**	-0.14***
WE	0.13***	0.00	0.04	-0.14***
F-Statistic	171.59***	481.63***	84.49***	99.64***
Durbin-Watson	1.53	1.56	1.35	1.39
Adjusted R-square	0.11	0.26	0.06	0.07

Notes: N=18829; regression coefficients higher than 0.1 are marked bold. *** significant at the 0.01 level, ** significant at the 0.05 level, * significant at the 0.10 level (two-tailed).

As the statistical significance of country group dummies (see Table 2) revealed that there are probably some differences between country groups, next the regressions were run separately for all three country groups. The results of this analysis can be found in Appendix Table A4. Following Table 3 highlights the relationships which had different signs of regression coefficients in different country groups.

Table 3. Differences between country groups in regression results

	Institutional trust	Formal networks	Social norms
Age	WE + NMS + NC – (ns)	WE + NMS – (ns) NC -	
Income	WE + NMS + NC -		WE + NMS - NC -
Education	WE + NMS - NC (ns)		WE + NMS + NC -
Individualism	WE - NMS – (ns) NC +		WE - NMS + (ns) NC +

"+" denotes positive regression coefficient, "-" denotes negative regression coefficient and "ns" refers to insignificant relationship.
Source: author's generalisations on the basis of regression results presented in Appendix A4.

The only component of social capital which was influenced mostly similarly by supposed determinants in different country groups was general trust (as a small exception, having children had positive effect in WE but weak negative effect in NC and NMS). As can be seen from Table 3, most diverse results appeared when analysing the determinants of institutional trust and social norms. Both income and age associate with higher institutional trust in WE and NMS, while in NC-s the opposite holds. In case of individualism, just an opposite pattern can be observed. Education has also diverse effect on institutional trust: in WE those with higher education have more institutional trust, but in NMS they have less institutional trust (in NC-s this relationship was insignificant). These mixed results could be related to the differences in actual quality of institutions in different country groups, although theory suggested that in post-communist countries the relationship between institutional quality and institutional trust is not quite clear.

As regards social norms, both income and education have positive effect in WE and negative effect in NC, while the effect of individualism is just opposite in these country groups. In new member states, the effects of the same determinants are mixed: education has positive effect on social norms similarly to western European countries, while regarding the effect of income and individualism NMS-s are more similar to neighbouring countries where higher income decreases the acceptance of norms (in case of individualism the regression coefficient is positive like in NC-s but insignificant).

Finally, age has different effect on participation in formal networks: in WE the number of connections increases with age while in NC older people participate less

in formal networks. The latter could be explained by different past experiences – under communist rule formal participation was mostly "forced" not voluntary and this could have generated unwillingness to join different organisations even after the collapse of old social order.

Summing up, it seems that the determinants of social capital are in accordance with theory only in WE countries and tend to be opposite in NC-s, while new member states with communist background are somewhere in between – in some aspects they are already more similar to more developed western European societies, while in others they still suffer from past communist rule.

4. Conclusions

Current study aimed to compare the levels and dynamics of social capital in EU old and new member states, and to examine the determinants of social capital comparatively in different country groups, in order to highlight problem areas regarding harmfully low levels of social capital in some countries or country groups, and to find possible policy solutions which help to increase social capital. As one of the tasks of this study was to highlight the particular features of social capital in post-communist countries, total sample was divided into three groups of countries: Western European countries including 15 "old" EU members plus 5 other countries from the region, new member states including 10 post-communist countries from Central and Eastern Europe plus Cyprus and Malta, and 15 neighbouring countries mostly from CIS and Balkan.

As social capital is a multifaceted concept, it can be best described by different dimensions instead of one overall index. Based on the theoretical considerations and also the availability of certain social capital data for as many European countries as possible, it was reasonable to distinguish between four components of social capital – general trust, institutional trust, social norms and formal networks. These components were derived on the basis of 12 initial indicators from European Values Study dataset using confirmatory factor analysis.

Firstly, country mean factor scores were calculated and the levels of social capital in 1990 and 2008 were compared. Comparison of the levels of social capital showed that in case of all social capital components, the levels were lower in NMS as compared to WE. During 1990-2008, the average level of social capital decreased in NMS and increased in WE. In less developed NC-s institutional trust and social norms appeared to be stronger than in NMS, but lower than in WE. Based on historical experience it could be suggested that, unfortunately, there is a possibility that institutional trust and acceptance of social norms would decrease in neighbouring countries when overall economic situation improves, as it has happened earlier in new member states. In this situation, it is highly important to ensure the effectiveness and fairness of formal institutions when implementing economic and political reforms, in order to withstand possible decrease in institutional trust.

Secondly, regression analysis was conducted in order to investigate the determinants of social capital, which were divided into two broader categories: 1) socio-demographic factors like gender, age, income, education, employment and marital status, number of children and town size; and 2) cultural and psychological factors including individualism, satisfaction with democracy and religiosity. Most recent data from EVS round 4 were used, referring mostly to year 2008. Results of the regression analysis showed that most influential factors of social capital are education and satisfaction with democracy. Therefore, investments in educational system and improving democratisation processes could increase the level of social capital. Social capital also associates positively with age, income, and having children, while there was negative relationship between social capital, town size and individualism. As can be seen, some of the factors analysed could not be easily affected by policies, while encouraging overall economic and social development would give contrary results: growing incomes and population ageing tend to increase social capital, while spreading individualism might decrease social capital.

Regarding the limitations of this study, only individual-level determinants of social capital were explored, which did not explain all differences between country groups. Regarding the further research, it would be reasonable to supplement the analysis with additional national-level determinants of social capital, such as overall level of development, quality and fairness of formal institutions, distribution of resources and society's polarization, and prior patterns of cooperation and trust. Also, clustering countries instead of analysing pre-defined country groups could give some additional insight into the state of social capital as an important factor of economic development and welfare in Europe.

References

1. **Alesina, A., Ferrara, E.** (2000). The Determinant of Trust. - NBER Working Paper Series, No. 7621
2. **Badescu, G., Uslaner, E. M.** (eds) (2003). Social Capital and the Transition to Democracy. London and New York: Routledge
3. **Bartkowski, J.** (2003). Social Capital in Poland. – In: Badescu, G., Uslaner, E. M. (eds), Social Capital and the Transition to Democracy, pp. 184–199.
4. **Bolin, K., Lindgren, B., Lindström, M., Nystedt, P.** (2003). Investments in Social Capital – Implications of Social Interactions for the Production of Health. - Social Science & Medicine, Vol. 56, pp. 2379–2390.
5. **Brown, E., Lankford, H.** (1992). Gifts of Money and Gifts of Time: Estimating the Effects of Tax Prices and Available Time. - Journal of Public Economics, Vol. 47, pp. 321–341.
6. **Christoforou, A.** (2005). On the Determinants of Social Capital in Greece Compared to Countries of the European Union. - FEEM Working Paper, No. 68.
7. **Denny, K.** (2003). The Effects of Human Capital on Social Capital: A Cross-Country Analysis. - The Institute for Fiscal Studies, Working Paper No. 16.
8. **Durlauf, S. N., Fafchamps, M.** (2004). Social Capital. - NBER Working Paper Series, No. 10485.

9. **EVS** (2010). European Values Study 2008, 4th wave, Integrated Dataset. GESIS Data Archive, Cologne, Germany, ZA4800 Data File Version 2.0.0 (2010-11-30) doi:10.4232/1.10188
10. **Fidrmuc, J., Gërxhani, K.** (2005). Formation of Social Capital in Eastern Europe: Explaining Gap vis-à-vis Developed Countries. - CEPR Discussion Paper, No. 5068
11. **Flap, H., Völker, B.** (2003). Communist Societies, the Velvet Revolution, and Weak Ties: The Case of East Germany. – In: Badescu, G., Uslaner, E. M. (eds), Social Capital and the Transition to Democracy, pp. 28–45.
12. **Fukuyama, F.** (1995). Trust: The Social Virtues and the Creation of Prosperity. New York: The Free Press.
13. **Gibson, J. L.** (2003). Social Networks, Civil Society, and the Prospects for Consolidating Russia's Democratic Transition. – In: Badescu, G., Uslaner, E. M. (eds), Social Capital and the Transition to Democracy, pp. 120–139.
14. **Halman, L., Luijkx, R.** (2006). Social Capital in Contemporary Europe: Evidence from the European Social Survey. - Portuguese Journal of Social Science, Vol. 5, pp. 65–90
15. **Helliwell, J. F., Putnam, R. D.** (1999). Education and Social Capital. - NBER Working Paper, No. 7121.
16. **Howard, M. M.** (2002). The Weakness of Civil Society in Post-Communist Europe. New York: Cambridge University Press.
17. **Howard, M. M.** (2003). Why Post-Communist Citizens Do Not Join Voluntary Organizations? – In: Stolle, D., Hooghe, M. (eds), Generating Social Capital, pp. 101–120, Palgrave Macmillan.
18. **Inglehart, R.** (1990). Culture Shift in Advanced Industrial Society. Princeton: Princeton University Press.
19. **Kaasa, A., Parts, E.** (2008). Individual-level determinants of social capital in Europe. - Acta Sociologica, Vol. 51, No. 2, pp. 145-168.
20. **Kaasa, A.** (2009). Effects of Different Dimensions of Social Capital on Innovative Activity: Evidence from Europe at the Regional Level. - Technovation, Vol. 29, No. 3, pp. 218-233.
21. **Knack, S., Keefer, P.** (1997). Does Social Capital Have an Economic Payoff? A Cross-Country Investigation. - The Quarterly Journal of Economics, November, Vol. 112, No. 4, pp. 1251–88.
22. **La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R. W.** (1997). Trust in Large Organizations. - American Economic Review, Vol. 87, No. 2, pp. 333–338.
23. **Mateju, P.** (2002). Social Capital: Problems of its Conceptualization and Measurement in Transforming Societies. Paper presented at the OECD-ONS Conference on Social Capital Measurement, London, UK.
24. **Montgomery, John** (ed) (2000). Values in Education: Social Capital Formation in Asia and the Pacific. Hollis, New Hampshire: Hollis Publishing Company
25. **Offe, C., Fuchs, S.** (2002). A Decline of Social Capital? The German Case. – In: Putnam, R. (ed) Democracies in Flux: The Evolution of Social Capital in Contemporary Society. Oxford: Oxford University Press.

26. **Ostrom, E.** (1999). Social Capital: A Fad or a Fundamental Concept? – In: Dasgupta, P., Serageldin, I. (eds), Social Capital. A Multifaceted Perspective. Washington, D.C.: The World Bank, pp. 172-214
27. **Paldam, M.** (2000). Social Capital: One or Many? Definition and Measurement. - Journal of Economic Surveys, Vol. 14, No. 5, pp. 629–653.
28. **Parts, E.** (2009). Social capital, its determinants and relations with economic growth: comparison of the Western European and Central and Eastern European countries. PhD dissertation, University of Tartu, 293p.
29. **Putnam R.D., Leonardi, R., Nanetti, R.** (1993). Making Democracy Work: Civic Traditions in Modern Italy. Princeton: Princeton University Press.
30. **Raiser, M., Haerpfer, C., Nowotny, T., Wallace, C.** (2001). Social Capital in Transition: A First Look at the Evidence. - EBRD Working Paper, No. 61.
31. **Rose, R.** (1999). What Does Social Capital Add to Individual Welfare? An Empirical Analysis of Russia. – The World Bank Social Capital Initiative Working Paper No. 15.
32. **Rose, R., Mishler, W., Haerpfer, C.** (1997). Social Capital in Civic and Stressful Societies. - Studies in Comparative International Development, Vol. 32, No. 3, pp. 85–111.
33. **Rothstein, B., Stolle, D.** (2002). How Political Institutions Create and Destroy Social Capital: an Institutional Theory of Generalized Trust. Retrieved from http://upload.mcgill.ca/politicalscience/011011RothsteinB.pdf. (01.07.2005)
34. **Soroka, S. N., Helliwell, J. F., Johnston, R.** (2003). Measuring and Modelling Trust. – In: Kay, F. and Johnston, R. (eds) Diversity, Social Capital and the Welfare State. Vancouver, BC: University of British Columbia Press.
35. **Štulhofer, A.** (2000). Dynamics of Social Capital in Croatia 1995–1999, The World Bank social capital homepage.
36. **Uslaner, E. M.** (2003). Trust and Civic Engagement in East and West. – In: Badescu, G. and Uslaner, E. M. (eds), Social Capital and the Transition to Democracy, pp. 81–94.
37. **Van Oorschot, W., Arts, W.** (2005). Social Capital of European Welfare States: the Crowding Out Hypothesis Revisited. - Journal of European Social Policy, Vol. 15, No. 5, pp. 5–26.
38. **Van Oorschot, W., Arts, W., Gelissen, J.** (2006). Social Capital in Europe: Measurement, and Social and Regional Distribution of a Multi-faceted Phenomenon. - Aalborg University, CCWS Working Paper, No. 44.
39. **Whiteley, P. F.** (1999). The Origins of Social Capital. – In: Van Deth, J. W., Maraffi, M. and Whiteley, P. (eds), Social Capital and European Democracy, pp 25–44. London: Routledge.

Appendix 1. Indicators of social capital

Latent factor of social capital	Initial indicators	Factor loadings	Variance explained	KMO
General trust	People can be trusted/cant be too careful	-0.702	60.76%	0.635
	Most of the time people try to be helpful or mostly looking out for themselves	0.799		
	Most people try to take advantage of you or try to be fair	0.831		
Institutional trust	Confidence in government	0.875	73.30%	0.714
	Confidence in parliament	0.848		
	Confidence in political parties	0.845		
Formal networks	Unpaid work for different voluntary organizations	0.902	81.43%	0.500
	Belonging into different voluntary organizations	0.902		
Social norms	Not justified: cheating on taxes	0.764	52.76%	0.747
	Not justified: avoiding fare in public transport	0.734		
	Not justified: claiming state benefits	0.710		
	Not justified: accepting a bribe	0.696		

Source: author's calculations on the basis of EVS.

Appendix 2. Country mean factor scores of social capital, 2008

Country	General trust	Institutional trust	Formal networks	Social norms
Albania	-0.53	-0.21	0.36	-0.27
Armenia	-0.33	0.09	-0.40	0.06
Azerbaijan	-0.41	0.89	-0.15	-0.16
Austria	0.24	-0.21	0.03	-0.15
Belarus	0.07	0.44	-0.19	-0.90
Belgium	0.21	-0.01	0.20	-0.14
Bosnia Herzegovina	-0.24	-0.31	-0.39	0.12
Bulgaria	-0.45	-0.74	-0.30	0.33
Croatia	-0.24	-0.57	-0.18	-0.13
Czech Republic	-0.06	-0.40	0.01	-0.30
Cyprus	-0.60	0.46	-0.23	-0.23
Denmark	1.13	0.62	0.91	0.45
Estonia	0.20	-0.18	-0.05	0.03
Finland	0.60	0.02	0.32	0.21
France	0.16	-0.01	-0.12	-0.27
Georgia	-0.07	0.12	-0.46	0.22
Germany	0.25	-0.17	-0.14	0.11
Great Britain	0.46	-0.32	-0.05	0.30
Greece	-0.54	-0.27	-0.29	-0.32
Hungary	-0.16	-0.47	-0.37	0.16
Iceland	0.83	0.04	0.73	0.26
Ireland	0.50	0.19	0.42	-0.06
Italy	-0.07	-0.22	0.75	0.16
Kosovo	-0.33	0.86	0.28	0.53
Latvia	0.09	-0.43	-0.17	-0.34
Lithuania	-0.23	-0.28	-0.27	-0.46
Luxembourg	0.19	0.60	0.47	-0.22
Macedonia	-0.36	0.21	-0.08	0.28
Malta	-0.03	0.47	-0.33	0.56
Moldova	-0.44	-0.04	-0.23	-0.11
Montenegro	-0.21	-0.08	-0.29	0.20
Netherlands	0.71	0.29	1.14	0.23
Norway	0.97	0.45	0.31	0.17
Poland	-0.04	-0.43	-0.42	-0.25
Portugal	-0.33	-0.15	-0.19	0.16
Romania	-0.40	-0.31	-0.24	-0.17
Russian Federation	0.30	0.22	-0.42	-0.56
Serbia	-0.35	-0.61	-0.25	0.25

Appendix 2 continues …

Country	General trust	Institutional trust	Formal networks	Social norms
Slovak Republic	-0.31	0.25	-0.28	-0.37
Slovenia	-0.01	0.18	0.14	0.07
Spain	0.13	0.04	-0.34	-0.07
Sweden	0.80	0.38	0.19	-0.09
Switzerland	0.64	0.46	0.24	0.22
Turkey	-0.53	0.29	-0.41	0.60
Ukraine	0.10	-0.57	-0.38	-0.04

Source: author's calculations.

Appendix 3. Indicators of the determinants of social capital

Indicator	Exact description and measurement
Gender	1=male, 2=female
Age	continous scale (year of birth was asked in the survey)
Income	monthly household income (x1000), corrected for ppp in euros
Education	highest educational level attained respondent (8 categories)
Unemployment	1=yes, 0=no
Married	having steady relationship (1=yes, 0=no)
Children	how many children do you have
Town size	size of town where interview was conducted (8 categories)
Individualism	people should stick to own affairs (1=disagree strongly … 5=agree strongly)
Democracy	are you satisfied with democracy (1=not at all … 4=very satisfied)
Religiosity	are you a religious person (1=convinced atheist, 2=not religious person, 3=religious person)

Appendix 4. Determinants of social capital: Regression results by country groups (standardized regression coefficients)

Independent variables	General trust			Institutional trust			Formal networks			Social norms		
	WE	NMS	NC	WE	NMS	NC	WE	NMS	NC	WE	NMS	NC
gender	0.05***	0.05***	0.02	0.00	0.01	0.00	-0.03**	0.02	-0.04***	0.06***	0.06***	0.02
age	**0.10*** **	0.00	0.09***	0.04***	0.07***	-0.01	0.04***	-0.01	-0.05***	**0.22*** **	**0.19*** **	0.09***
income	0.08***	0.06***	0.02	0.07***	0.06***	-0.05***	0.08***	0.06***	0.04***	0.05***	-0.05***	-0.02**
education	**0.18*** **	0.05***	**0.11*** **	0.04***	-0.03*	0.00	**0.19*** **	**0.12*** **	0.04***	0.02	0.04**	-0.07***
unemployed	-0.03***	-0.03*	-0.05***	-0.02**	-0.02	-0.01	-0.02**	-0.03	-0.01	-0.02	-0.01	0.03**
relationship	0.01	-0.01	0.00	0.01	-0.02	-0.03***	0.05***	0.03**	-0.01	-0.03***	-0.04***	-0.07***
children	0.03***	-0.01	-0.03**	0.01	0.01	0.05***	0.04***	0.01	0.02	0.04***	0.03	0.04***
size of town	-0.01	0.00	0.02	-0.01	-0.07***	-0.01	-0.06***	-0.07***	-0.04***	-0.04***	-0.01	-0.04***
individualism	**-0.13*** **	-0.03**	-0.04***	-0.05***	-0.01	0.03***	**-0.13*** **	-0.01	-0.02*	-0.05***	0.02	0.08***
democracy	**0.15*** **	**0.18*** **	0.06***	**0.47*** **	**0.38*** **	**0.54*** **	0.03**	0.06***	0.04***	0.03***	0.00	0.05***
religiosity	-0.05***	0.00	-0.02*	0.04***	0.03**	0.00	0.08***	-0.03*	0.00	0.07***	0.04**	**0.11*** **

Notes: regression coefficients higher than 0.1 are marked bold.
*** significant at the 0.01 level, ** significant at the 0.05 level, * significant at the 0.10 level (two-tailed).

THE DOMINANCE OF INDIRECT TAXES IN ESTONIAN STATE BUDGET

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Abstract

Recession has sharply erected the question of tax burden and the optimal proportion of different kinds of taxes among the incomes of the budget. Indirect taxes and consumption taxes, which proportion is different according to different methodologies, dominate in Estonian state budget. The buoyancy of a tax system based on taxes of that kind is especially weak during the recession. The purpose of Estonian government's economic policy during the highest peak of crisis was to keep the budget in balance. Instead of recovering economy the taxes were arisen and costs were reduced. The results of such a policy aren't still clear. Difficulties concerning the incomes of budget have arisen the necessity for lifting taxes, which is possible as the tax burden is low now. But a sharp question of the optimal level of taxes is going to be raised. A formula for indirect tax optimum according to Ramsey taxes and Slutski decomposition has been proposed in the article.

Keywords: Taxation, tax burden, Estonian state budget, Ramsey taxes, indirect tax optimum

JEL Classification: H270

The problem

Everybody is familiar with the saying that death and taxes are the two most unpleasant as well as inescapable things. There are many goods that cannot be provided by the private sector but only by the state. Furthermore, with many goods provided by the private sector it is not possible to identify a consumer who would have to pay for them. It is the state that has to pay for these so-called public goods. According to Wagner's law the income elasticity of public expenditures is greater than 1, therefore the demand for state-financed services grows in proportion to the increase of income. That also means an increased demand for state budget revenues, mostly taxes. According to a popular opinion the state budget revenues should contain at least 90% taxes (loans not included).

Bigger state budget also means bigger taxes. Taxes in turn diminish the resources available to households and therefore welfare. So the question arises – which is bigger, the decrease in welfare of households and the state as a whole due to an increase of taxes, or the rise in welfare due to public goods and an increase in consumption? Naturally both these effects become evident through the behaviour of economic agents. Accordingly, with all taxes there is a question of their impact on the short- and long-term behaviour of economic agents.

In economic theory, this question can be approached from two viewpoints. First, it is possible to point out a set of principles, parameters and arguments, and construct models based on theoretical considerations, without taking into account particular numerical data. The other function of the theory is to provide a scientific set of analytical devices for the empirical data that would make giving practical suggestions possible. This part of the theory also needs to explain what kind of data from the millions of practical cases need to be gathered.

Not all of these interconnected problems can be discussed on these pages. We set out to consider two issues: first, to demonstrate the large proportion of indirect taxes in Estonian state budget, and second, to consider the problem of optimum in indirect taxing.

Eliminating extranalities

As a general rule, establishing or increasing taxes also raises prices. Accordingly, the reaction of households to taxes consists of the sum of two effects – income and substitution effect (the latter can be marginal, if the prices of all goods rise in proportion to the tax increase. But as the demand and supply elasticities of goods differ, this possibility is only theoretical and will therefore not be consider here). To achieve actual substitution effect the rise in prices needs to be compensated to the consumer. There are two possibilities for that – either to grant a specific amount of money to the consumer (household) based on the method introduced to the economic theory by Slutsky, or to try to compensate for the increase of prices to both the consumer and the supplier. If we choose the first option, Pareto effective situation is achievable (of course, in the absence of external effects and on the condition that indifference curve and isoquant are traditional) as a point of balance where the state incomes and expenditures for ensuring purchase power are even. The second option is of primarily theoretical interest as it would entail moving sums of money back and forth, and the final result would be marginal. We will not examine this option.

Tax elasticity, buoyancy and incidence

With any taxation system, three of its characteristics are of vital importance: elasticity, buoyancy and incidence. First of these shows the ability of a tax or of the system of all nationwide taxes to generate increased tax revenues in case of positive shifts in the object of taxation, primarily income or turnover. In practice, of course, tax elasticity depends on not only the type of tax, but also (if not primarily) on the structure of the system of collecting the particular tax. There are different approaches to buoyancy, but for the purposes of this study it is sufficient to regard it as a certain elasticity indicator in the situation where negative shifts are taking place in the object of taxation. The greater the buoyancy of a tax (and the whole system of taxation), the smaller the risk that in case of negative deviation in economy, primarily in the object of taxation, state income is significally reduced or the tax system even collapses.

The problem of the elasticity and buoyancy of tax systems was posed already in 1959 by R. A. Musgrave (Musgrave, 1959). Since then, all taxes connected with consumership and sale (sale tax, excises, VAT etc) have been regarded as elastic. With income tax, opinions vary – it has been regarded as both elastic and anelastic. Customs tax and duties are universally regarded as anelastic (Goode et al., 1984).

With buoyancy, the situation is more difficult. When it comes to analysis of buoyancy, authors either confine themselves to the analysis of elasticity in certain special cases (in the case of negative elasticity coefficient) or essentially forgot it. The reason for that is simple – during the past few decades there has been no opportunity to study national tax systems in a situation of clear economic depcession. The last bigger and more widespread depression took place in 1974–75 and even that was due to external factors (negative supply shock caused by oil prices), and therefore the analysis of the data from that period does not always produce „pure" results. Of course, it is not advisable to confine oneself to mere theoretical approaches or make conclusions based on 50-year-old data. In that sense the current depcession in Estonia and elsewhere is an interesting base material for future research. However, these analyses can be properly made only in a few years' time.

The questions of tax incidence have received more attention. The spreading on tax burden between demandant and supplier, but also between different social strata of varying income, is the key question of not only taxation, but of all macroeconomics and economic policy. By how much does the income of a certain social stratum decrease in real life and how much does the demand drop as a consequence? If the supplier becomes the tax bearer, then by how much do the prices rise? How much does that in turn reduce demand? It is a wide-spread view that indirect taxes, which dominate in developing countries and make up a particularly large percentage in Estonia, are regressive towards income. Unfortunately the latest in-depth statistical studies in that field date back to more than 30 years ago, when the tax systems of newly independent developing countries were actively researched. As those countries quickly changed the structure of their taxes, there are almost no studies about countries with a tax system analogous to that of Estonia today. Even of Eastern European countries only Latvia has a tax structure similar to Estonia.

Optimal tax rates

As mentioned earlier, the decrease in state budget revenues has raised the question of a possible increase of tax burden in Estonia already in 2009. Next, we will try to construct a model to determine the optimum of the dominant indirect taxes.

In an attempt to maintain comprehensiveness, we will base our model on two common views on model-construction in taxation theory. First, the state revenues from taxes come as lump-sum taxes straight from households, and second, any transaction between the consumer and the supplier increases state revenues. There are no external forces, the indifference curve and isoquant are standard. In the absence of any other taxes such premise leads to Pareto optimum in the point where

the increase in state revenues and the purchasing power redistribution curve meets with the lump-sum taxes curve. Adding any other taxes directs us away from that point. Essentially we are trying to find a solution that would bring about an increase in state revenues by increasing consumption taxes, while reducing the welfare of households as little as possible. If we expect taxes to be used for an increase in social welfare, we can claim that when the left side of equation (1) exceeds the right side, the total social welfare has increased.

To put it in the form of an equation: we are trying to choose the tax vector t in such a way as to maximize social welfare V(q). If we designate the total revenue of subjects from indirect taxes with R(t), we arrive at:

$R(t) = t \bullet X(q) \geq \vec{R}$, (1)

where X(q) is the vector of aggregated demand and $\vec{R}$ is the required tax revenue.

With taxes imposed, a quantity q is supplied for price t, but the consumer pays the price (p+t). We designate the household welfare corresponding to quantity q with v(q) and the household demand with x(q) and arrive at equation (1). Again, V(q) is the rise of social welfare caused by an increase in taxes.

The problem posed is easily solved if we use Ramsey's rule of optimal taxes and Lagrange's widespread method of determining maximum. We maximize V + λ R, where λ is the Lagrange multiplier, which in this case does not indicate the marginal utility of some particular good supplied by the private sector, but of the social welfare arising from the increase in state revenues.

We can write:

$$\frac{\partial V}{\partial t_i} + \lambda \frac{\partial R}{\partial t_i} = 0. \qquad (2)$$

If we make the substitution

$$\partial V / \partial t_i = -\sum_h \beta^h x_i^h \text{ and } \partial R / \partial t_i = X_i + t \cdot \partial X / \partial t_i$$

and use Slutsky's compensated demand curve of demand derivative, we get:

$$\frac{\sum_k t_k \sum_h s_{ik}^h}{X_i} = -\sigma_i$$

$$\sigma_i = 1 - \sum_h \frac{x_i^h}{X_i} \frac{b^h}{\bar{b}} \qquad (3,4)$$

S_{ik}^h is the derivative of Slutsky's compensated demand curve on household h (the utility level preceding the tax increase has been maintained) and σ_i is negative because there is a covariance, b^h, of the social marginal utility of the net income of

household h (where the „net“ means there is an adjusment to the social marginal utility, β^h, for the marginal propensity to spend on taxes out of extra income, and b is the average of b^h) and the consumption of good i by houshold h, (x^h_i). Thus, σ_i is higher the more good is consumed by those who have a low social marginal utility of income.

As the above equations (1) and (2) take into account the most important aspects of the interconnection of taxes and social welfare, it can be successfully used to describe the social aspect of the efficiency of indirect taxes. However, these equations as well as those suggested earlier (Ahmed; Stern, 1989) are practicable only on the condition that we succeed in mathematically describing the function of the social welfare of households, from which we can then find the derivative. As a rule, the task of describing the function of the welfare of households is often difficult to solve with adequate accuracy, i.e the same kind of problems arise as in the case of using Hicks's method to subtract the substitution and income effect.

The structure of taxes in Estonia

Certainly, there are more theoretical conceptions about the optimal tax structure and optimal tax burden (Neberry, 2007). But the tax structures of all states differ from every optimal model. Some main principles of Estonian tax structure are observed in following.

In the initial stage of its tranition period, Estonia (like most other Eastern European countries) was in a unique position – it essentially lacked a taxation system, a vital instrument of economic policy, which now needed to be constructed. In a perfect world, that would have meant building a system based on contemporary economic theory. Unfortunately Eastern European countries lacked pertinent knowledge, both in regard to taxation theory and the economic situation (an accurate description of the development phase and the processes).

Estonia has been advertised as a state of low tax burden. But the attitude isn't supported by the data of Eurostat. Table 1 demonstrates the general tax burden of EU. The table has been compiled the way that it could demonstrate the highest and lowest tax burdens and the states of greatest change in tax burdens and the states of tax burden most similar to Estonia.

The data of table 1 demonstrate that factually Estonia isn't a state of the lowest tax burden, but it's one of the average ones (it's the 15th among 27). But Estonia is a state of EU 5 members, where the tax burden has arisen in 2000-2010. If one would consider the fact that Malta and Cyprus were factually off-shore states before EU in 2004 and that they had to increase their tax burden for EU, so Estonia remains actually the state of highest tax burden in EU. The reason can be seen in the tax structure of Estonia.

The taxes are divided into three according to the object by Eurostat: consumption taxes, labour taxes and capital taxes. The following figures show the tax revenues of

these three possibilities of taxes in 2010. Estonia is generally among the average ones in EU by the tax burden; the tax burden is as an average of EU, but the role of consumption taxes puts it on the second place and the role of capital taxes on the last place.

Table 1. Tax burden of some EU states in 2000 and 2010

State	2000	2010	Change	Rank
• CY	29,9	35,7	+5,8	13
• MT	27,9	33,3	+5,4	17
• EE	31,0	34,2	+3,2	15
• IT	41,5	42,3	+0,8	5
• PT	31,1	31,5	+0,5	20
• DK	49,4	47,6	-1,8	1
• SE	51,5	45,8	-5,8	2
• BE	45,1	43,1	-1,2	3
• FR	44,2	42,5	-1,8	4
• FI	47.2	42,1	-5,1	6
• UK	36,7	35,6	-1,1	14
• CZ	33,8	33,8	0	16
• LV	29,7	27,3	-2,4	2
• RO	30,2	27,2	-3,0	26
• LT	29,9	27,1	-2,9	27
• SK	34,1	28,1	-6,0	23

Source: by the author on basis of the following data:
http://ec.europa.eu/taxation_customs/resources/documents/
taxation/gen_info/economic_analysis/tax_structures/index_en.htm

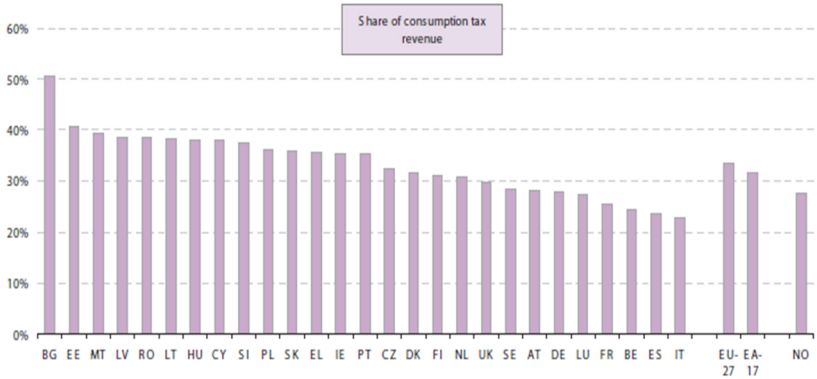

Figure 1. The role of consumption taxes in the budgets of EU members in 2010 (Taxation. http://epp.eurostat.ec.europa.eu/portal/page?- pageid/136748).

Figure 2. The role of labour taxes in the budgets of EU members in 2010 (Taxation. http://epp.eurostat.ec.europa.eu/portal/page?- pageid/136748).

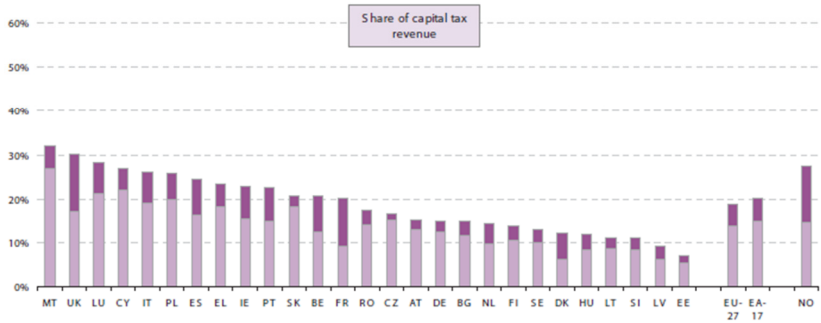

Figure 3. The role of capital taxes in the budgets of EU members in 2010 (Taxation. http://epp.eurostat.ec.europa.eu/portal/page?- pageid/136748).

The economic crisis has brought attention to the issue of tax structure. Table 2 presents taxes in Estonian state budget from 2005, i.e after Estonia joined the EU. It is difficult to assess what is the percentage of indirect taxes in Estonian state budget. Indirect taxes clearly include VAT, excises and the customs tax. However, also the gambling tax has some features characteristic to indirect taxes, as it is not imposed on the revenues from economic activities but rather as a preventive lump-sum tax, i.e before launching the slot machine etc. The tax sum is transfered by the manager of the gambling business in some way (e.g by raising drink prices) to the actual bearer – the gambler, i.e consumer. Accordingly this tax also has the incidence characteristic of indirect taxes and therefore it is more accurate to regard it as an indirect tax (at least when it is established in such a way as in Estonia).

As far as we know, there is no other country that has social benefits tax in the form that it exists in Estonia. The tax is paid by the employer, but it is calculated based on the amount of money paid to the employee. That tax is meant only for pensions and healthcare, i.e it functions largely as retirement and health insurance. Clearly, the defining criterium here is whether the emplyee's salary would increase by the amount that makes up the social benefits tax if that tax was abolished. If yes, the social benefits tax has enough characteristic features to regard it as an indirect tax; if not, the features of direct taxes probably prevail (the social benefits tax is the employer's expenditure). As this question is impossible to answer properly, authors classify it arbitrarily, depending on their views, as either a direct or indirect tax. Eurostat has taken a „diplomatic" position and classifies that Estonian social tax as a labour tax, regarding it therefore as primarily a resource tax (Taxation. http://epp.eurostat.ec.europa.eu/portal/page?- pageid/136748), but that is not entirely accurate as the income from social benefits tax is allocated for certain social expenditures.

It is probably reasonable to bring out the percentage of indirect taxes in different versions, with social benefits tax included and not. In the first case, the percentage of indirect taxes has made up 75.3–87.8% of state budget revenues ever since Estonia joined the EU; in the latter case the percentage has been 41.1–53.6%. If we take the first approach, we arrive at what is clearly the biggest percentage of indirect taxes among EU member states; even with the second approach the result is well above EU average.

When trying to determine the percentage of consumption taxes in Estonian state budget, we likewise have to face the question of how to classify some taxes that are different from those in other countries. Again we are talking mainly about social benefits tax. In the form that it exists in Estonia, it has been regarded as a tax on using one of the goods – labour – and hence as a resource tax. That, however, raises the question of whether it is a consumption tax. It is not the purpose of this study to discuss whether the multifunctional tax established during the transition period when there was no economicic-theoretical knowledge available belongs to this or that category. Therefore – although the author does not share the opinion that the social benefits tax as it exists in Estonia is a consumption tax – also the percentage of consumption taxes has been given in two versions in Table 2 – with social benefits tax included and not. It is clear that consumption taxes include VAT and excises. But does the customs tax on alcohol, furniture, meat etc count as a consumption tax? More likely yes – without consumption there is no tax. It is also certain that customs increase the prices and limit consumption – nobody will import if there is no demand. Gambling tax, as it exists in Estonia, should probably be classified as a consumption tax as well. Factor payments for the local governments can also be counted in, but these are not reflected in the state budget and will therefore not be considered here.

As seen from the figures presented in Table 2, a peculiar situation has taken shape in Estonia – if we take the above considerations (which are, admittedly, debatable) into account when classifying taxes, the percentage and amount of indirect and consumption taxes in the state budget coincide.

Regardless of how exactly we classify these taxes, we have to acknowledge that their proportion in the state budget is big. The figures in Table 2 and 3 also demonstrate the marginal role of environment taxes (which make up part of the „other taxes") in Estonian state budget.

Table 2. Income from taxes in Estonian state budget 2005–2012 (2005-2010 miljon kroons; 2011-2012 euros)

	2006	2007	2008	2009	2010	2011	2012
Total taxes	55208	67718	70396	63780	63299	4342	4775
Personal income tax	3846	4786	4328	2419	3000	227	266
Corporate income tax	3123	4083	4166	4010	3032	201	252
VAT	18645	22304	20548	18809	19531	1343	1494
Excises	7030	8195	8971	9818	10425	717	776
excise on tobacco	1208	1529	2519	2088	1794	145	158
excise on alcohol	2089	2314	2434	2590	2585	179	195
excise on fuel	3728	4353	4697	4870	4870	361	390
excise on packaging	3	…	1	1	1	1	1
Gambling tax	354	467	484	278	323	19	20
Customs tax	401	549	508	307	373	29	29
Social benefits tax	21764	27268	31299	28084	26562	1801	1933
Other taxes	45	66	92	55	62	5	15

Source: the author's calculations based on the Ministry of Finance homepage, http://www. fin.ee/.

It only takes basic calculation of percentage to demonstrate the growing dominance of social benefits tax in Estonian state budget – from 34.2% in 2004 to 44.4% in 2008. The economic crisis that started in 2008 will, however, in connection to the substantial rise in unemployment freeze the salaries to be paid in 2009. That in turn will lead to a drop in the income from social benefits tax. The halting of an increase in household incomes – or even their decrease – will, considering the big loan

burden of households, lead to a decrease of VAT and excises. That has already put enormous pressure on the 2009 state budget – it is clear that the absolute sum will be significantly smaller than in 2008. The revenues of a budget based on consumption taxes will probably have good elasticity during periods when incomes and consumption are quickly rising, but the buoyancy of such a system is weak. All prognoses, without exception, predict a substantial decrease in the rate of inflation (which has been high, ca 10% during the past few years) or even a decrease in prices (Estonian Ministry of Finance ...). Given the 44.4% social benefits tax and 29.2% VAT in the 2008 state budget, that adds further pressure on the 2009 budget.

Table 3. Indirect taxes in Estonian state budget 2005–2012 (2005-2010 million kroons, 2011-2012 million euros)

	2006	2007	2008	2009	2010	2011	2012
Total taxes	55208	67718	70396	63708	63299	4342	4775
Indirect taxes (social benefits tax included)	48217	58816	61856	57019	56923	3892	4239
Percentage of indirect taxes (%, social benefits tax included)	87.3	86.9	87.8	89,5	89,9	89,6	88,8
Indirect taxes (social benefits tax not included)	29572	31548	30557	29213	30351	2091	2306
Percentage of indirect taxes (%, social benefits tax not included)	53.6	46.6	43.4	45.8	47,9	48,1	48,3
Consumption taxes, social benefits tax included	48217	58816	61856	57019	56891	3885	4232
Percentage of consumption taxes (%, social benefits tax included)	87.3	86.9	87.8	89,5	89,9	89,6	88,7
Consumption taxes, social benefits tax not included	29572	31548	30557	29213	30329	2074	2299
Percentage of consumption taxes (%, social benefits tax not included)	53.6	46.6	43.4	45,8	47,9	48,1	48,1

Source: the author's calculations based on the data from Table 2. (Of „other taxes" 50% have been taken to be indirect.)

Economic Crisis and State Budget

All European states were hit by economic depression in 2008–2010. But its range and course have been very different in each case. As the crisis began in the financial sector, so the states where income from the financial sector formed the greatest part of GDP suffered first of all. Due to urgent and powerful measures taken by these states the situation was stabilized at this point. In some Eastern European states the economic depression turned into a severe crisis which could be compared with the Great Depression of 1929–1932, especially Estonia, Latvia and Lithuani (Table 4). There are several reasons for this, some objective and some subjective. Discussion of all these reasons is beyond the scope of this paper.

In this situation Estonian government did not base it's actions on the previously mentioned taxation theory that would have presumed the underlining of compensated demand curve and the adaption of taxes and the budget accordingly. The government denied the existance of the crisis and afterwards hoped on the self-correcting impact of the market forces. However, when it became clear that a budget built on the dominance of consuption taxes, which was a great income during the economic boom (tabel 3), was in a difficult situation when the crisis emerged, then the whole situation was not given an evaluation based on analysis, but the aim was set to ensure the stability of some financial indicators (mainly the balance of the budget). In the hope to ensure the balance of the budget the situation was set to be changed by random measures of which the macroeconomic results weren't (and aren't) analysed.

The data of tables 2, 3 and 4 expressively demonstrate an essential decrease of inland revenues of Estonia in 2008-2010. It's seen that the decrease was especially enormous in Estonia, wherein the role of consumption taxes is high. It was proofed that taxes from estate (real-estate tax, death tax) and income tax are more stable sources of budget than the consumption taxes.

It's widespread to enliven economy during an economic crisis through additional direction of money into entrepreneurship (decrease of taxes, loans from state or loans with state support etc.). The other possibility is the activation of consumption. Usually, the social welfares, subsidies for unemployment etc. are increased for it. The method helps to lessen social stresses in addition to the stimulation of demands.

Another way was chosen in Estonia. The purpose was to keep the balance of budget at any cost in order to fulfil the criteria of "euro uniting". There are two ways to stabilize the budget.

Table 4. Dynamics of tax funds, wages, unemployment and GDP in 2007-2012 (per cents in comparison with the same quarter of the last year)

Period	**2007**				**2008**			
	I	II	III	IV	I	II	III	IV
GDP	9,8	7,6	6,4	4,5	0.4	-1.4	-3.3	-9.9
Tax revenues	27.6	28,4	18,6	18,2	10,2	5,7	7,1	-2.8
Average wage	20,1	21,2	12,9	20,2	19,5	15,2	14,4	6,9
Unemployment (%)	4	3,9	4,1	4,1	4,2	4,0	6,2	7,6
Period	**2009**				**2010**			
	I	II	III	IV	I	I I	III	IV
GDP	-15.1	-16.5	-15.6	-9,7	-2,4	1,7	3,1	6,2
Tax revenues	-10.1	-12.1	-13.6	-10,9	5,7	-2,2	-1,0	2,2
Average wage	-1.5	-4.4	-5.9	-4,9	-2,3	-1,7	-0,7	3,9
Unemployment (%)	11,4	13,5	14,4	15,5	19,8	18,6	15,5	13,6
Period	**2011**				**2012**			
	I	II	III	IV	I	II	III	IV
GDP	11,4	12,7	9,8	4,0	3,4	3,5	3,4	3,7
Tax revenues	1,6	9,8	5,9	3,7	11,2	11,0	11,6	10,6
Average wage	4,4	4,2	6,5	3,9	4,1	4,2	4,3	5,9
Unemployment (%)	11,4	12,7	9,8	10,4	10,9	10,1	10,0	9,9

Source: Homepage of Ministry of Finance. http://www.ee/index.php?id = 233; Eurostat….

1. Increase of taxes. A classic measure against crisis is the lowering of taxes instead of increasing them. The increase of taxes as a measure against crisis according to our data has never been used nor have we found any corresponding literature which might recommend such action. Seemingly, this was a case of dominantly political approach in the wish of gaining good results in the upcoming elections. Once realised that the economic indicators were poor, it became a priority to try to meet the requirements of joining the euro zone and success was hoped to come due to ephasising this.

2. Cutting down budget expences during the crisis instead of increasing them. State budgets have found themselves in an especially severe situation. The contents of state budgets have had to be pared and negative supplementary budgets made. That

is, the contents of state budgets have to be pared within the year. But a cutting of that kind reduces consumption. As consumption taxes form the main part of the Estonian state budget, so a budget cutback of any description means a cutback in incomes in the next period.

Both were used in Estonia: the taxes were increased and the national reliefs were limited. Table 4 provides an overview of the most important taxes in Estonia during 2008-2009. Also, the income tax incentives were decreased (it isn't given in table 4).

The influence of the cuts in the budget on the further tax revenues has been observed previously (Raju, 2011); the influence of negative additional budgets has been demonstrated. According to the calculations of the author 3 negative additional budgets of 2008 and 2009, which total amount was 12.4 billion kroons, decreased the incomes in budgets of future periods not less than in 7 billion kroons (Raju, 2011). If we also consider the fact that if the cuttings had not been made, the unemployment rate would have risen more slowly and the unemployment benefits, income supports and other similar payments would have been lower, we start to question whether the cuttings were really economically justified. Thus, Estonia has acted contrariwise to common practice. The political purpose – the criteria for EU incorporation – was followed and euro was taken as a currency – but the crisis was intensified and the departure from it was extended. The average crisis of EU was 4-5 quarters, but it was 11 quarters in Estonia and the decrease of GDP was higher in Estonia than in EU (-24.3%). The system of indirect dominant taxes, the increase of tasxes and the connection of the length of the crisis and GDP decrease has to be observed in order to bring out the strength of the connection.

Table 4. Rates of the main taxes in Estonia in 2008 and 2009 (per cent)

Taxes	**2008**	**2009**
Social benefits tax	33	33
Income tax	21	21
VAT	18	20
Percentage of excise tax in retail sales	12,9	17
Unemployment insurance tax (employer)	0,30	1,25
Unemployment insurance tax (employee)	0,60	2,5

Source: Homepage of Ministry of Finance. http://www.ee/index.php?id = 233.

Summary

The following can be concluded from the above:

1. If we discount Malta and Cyprus as practically off-shore before EU, the tax burden of Estonia in 2000-2010 has been the highest in EU.

2. The structure of the revenues of the Estonian state budget differs considerably from that of other EU member states. The percentage of environment taxes is negligible, while the peculiarly structured social benefits tax, which constitutes the greatest and increasing source of revenue of the state budget, is difficult to classify as either a direct, indirect or labour tax. Due to the huge proportion of consumption taxes the buoyancy of Estonian tax system is weak. The results of 2008 -2010 demonstrate clearly that during periods of economic recession the state budget is very vulnerable.

3. The shortfall of income to the state budget in 2008 and especially at the beginning of 2009 has forced the government to make cutbacks up to 10% and has acutely raised the issue of increasing the tax burden. However, the question of optimal tax burden has to be raised. Based on Slutsky's principle of compensated demand curve and Ramsey's optimal tax theory we can take the optimal level of indirect taxes (which are dominant in Estonia) to be the point where the household welfare reduction curve and the social welfare increase curve intersect.

4. Whichever approach we take to defining indirect and direct taxing, it is clear that indirect taxes prevail in the income of the Estonian state budget. The social benefits tax makes up a particularly big – and growing – proportion. Different approaches lead to the same conclusion: the percentage of consumption and indirect taxes in the state budget is equal, i.e. indirect taxes have been imposed on consumption.

5.The purpose of economic politics different from other EU states – not to fight economic crisis but assuredly to passage to euro on 1. January 2011 – caused a different taxation and loan policy from other EU states in the years of crisis.

6. The way Estonian Government has chosen to balance the budget – a continuous cut of the expenses- forms a dead circle as the cur of the expenses, particularly the wages, is going to decrease the incomes of the next period. According to the most modest calculations, which haven't taken into consideration the decrease of the demand due to macroeconomic influence, the state budget of Estonia lost 2.2 billion kroons in 2008 and 10.5 billion kroons in 2009 due to the cuts of budget.

References

1. **Ahmad, E., Stern, N.** Taxation for developing countries. Handbooks in economics. V. II. 1989, pp. 1005 - 1092.
2. Estonian Ministry of Finance website http://www.fin.ee/
3. Eurostat. Taxation.http://epp.eurostat.ec.europa.eu/portal/page?- pageid/

4. **Goode, R.** Government finance in developing countries. Washington, DC.1984.
5. http:/7ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_structures/index_en.htm
6. **Musgrave, R. A**. The theory of public finance. New York, 1959.
7. **Newberry, D. M., Stern, N**. The theory of taxation for developing countries. Oxford, 2007.
8. **Raju, O.** Economic crisis and economic policy in Estonia 2007-2010. Discussions on estonian Economic Policy, 2, 2011. Berlin-Talinn, 2011.
9. Taxation. http://epp.eurostat.ec.europa.eu/portal/page?- pageid/136748
10. Taxation. http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_structures/index_en.htm

PUBLIC SECTOR INNOVATIONS AND THE DEMAND-SIDE INNOVATION POLICIES

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Abstract

The public sector innovations are important additions to private and social efforts towards development oriented changes in society. These innovations aim at improving the efficiency and societal value of public services. In order to do so, the new organisational arrangements as well as public-private partnerships are often called for. In these situations, the novel service configurations are designed by public policy makers, but the actual service provision might be delegated to private companies or to non-governmental organisations (NGOs). This kind of combined execution creates strong connection between public sector innovations and demand-side innovation policies. The purpose of this study is to offer the possible ways to combine public sector innovations with demand-side innovation policies in Estonia. This would allow building strong ties between innovative advances in private and public sectors, thus enhancing the change towards knowledge-based society.

Keywords: public sector innovations, demand-side innovation policies, Estonia

JEL Classification: O31, O32, O33, O38

Introduction

Knowledge-based society builds development on innovative solutions. Traditionally more attention is devoted to private sector initiatives in providing such novel market solutions. However, in the modern world, resources are often limited, while the expectations related to the quality and accessibility of publicly provided services increase (see also Micheli et al. 2012). Communities face an increasing number of problems that cannot be successfully solved with traditional public policy actions (Bland et al. 2010). These tendencies create eminent need for innovative new processes, solutions and strategies in the public sector. (Ibid.)

Some of these public innovations are strictly procedural and aimed at increasing the public sector efficiency. Others reflect much more extensive changes in the role of various policies concerning societal processes. Sometimes it involves extensive developments in service provision pattern, for example by delegating the policy

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execution to private sector or to NGOs. This is perhaps the most straightforward connection between public sector innovations and initiation of private service provision. Public procurement of ICT solutions or other technological elements required for re-shaping of the public service concepts offers another connection between public sector innovations and demand-side facilitation of innovative developments in private companies. The potential leadership role of public organisations as the initiators of innovations should also give a boost to innovative mindset among people and companies. When the public sector manages to set aside the adverse image of being perhaps most bureaucratic and rigid part of society the other sectors might be led by positive example and supportive policies.

Although public sector innovations and private innovations have several common characteristics, there are some important differences. Public sector innovations should advance the public good and increase the public value (Bland et al. 2010). Thus, the main benefits of these innovations should clearly address public interests. Yet, this does not mean that such innovations cannot gain additional power from complementarities with private demand. Such potential for mutually reinforcing public and private innovations suggests that public sector innovations should indeed be used as one of the tools in facilitating similar private initiatives. However, this should be done very cautiously, because mistakes in reshaping public service provision could result in negative impact that is reinforced by misguided shifts in private sector. Thus, the public-private innovative initiatives involve social risks.

The purpose of this study is to offer the possible ways to combine public sector innovations with demand-side innovation policies in Estonia. The analysis outlines the features of public sector innovations and the connections of these innovations with the private innovations. Then the viewpoint is reversed and author seeks to connect demand-side innovation policy tools with various public sector innovations. Based on this dual approach, policy recommendations are formulated concerning the enhancement of ties between public sector innovations and demand-side innovation policies.

The paper starts with the discussion of public sector innovations, especially in the comparison and in relation to private sector innovations. The next section views the potential connections from the viewpoint of demand-side innovation policy tools. The third section provides an analytical evaluation based on the examples of demand-boosting public innovations in Estonia. The fourth section recommends the policies that could enhance the role of public sector innovations in facilitating demand for private innovations. The concluding section summarizes the results and limitations of this research as well as suggests the paths for future research.

Public sector innovations and their role in facilitating private innovativeness

Public sector has been described by rigidity, inefficiency, inflexibility, resistance to change, risk aversion and hierarchical structures that create excess inertia and tendency to utilize existing knowledge more and more instead of gaining new knowledge (see Micheli et al. 2012; Vogel, Frost 2009; Vigoda-Gadot et al. 2008).

These barriers to innovation do not suggest that public sector organisations would be capable of using the new ideas or approaches that challenge traditional understanding. Yet, in the dynamic world, the landscape of public service provision has to change as well. Numerous new problems arise for which traditional methods fail to produce adequate solutions (Bland et al. 2010). Therefore, the public sector must be innovative as well.

There seems to be no uniform and widely accepted definition of the public sector innovations. Several authors (Salge, Vera 2012; Micheli et al. 2012; Potts, Kastelle 2010; Luke et al. 2010; Bland et al. 2010) interpret the phenomenon by using the general concepts of innovation and then adjusting them to the characteristics of public sector. Majority of these definitions include the generation, development or acceptance and adoption of new ideas and activities. In public sector, it should challenge the traditional wisdom, increase the public good and create public value (Bland et al. 2010). That is why public sector innovations should not be solely efficiency oriented, as they sometimes tend to be, but avoid causing suffering and public neglect in the process. This highly social dimension of such innovations undoubtedly increases the risks of adopting the new approaches and policy schemes. Thus, the responsibility of the innovator is usually greater than in the private sector.

However, Potts and Kastelle (2010) provide arguments against the expectations that public sector innovations should or could be risk-free and aimed always on cautious success. Failures in innovation are to be seen as natural. Potts (2009) argues that public services are too focused on efficiency, which does not allow for failures in experimenting with innovative solutions. He suggests using the elimination processes based on negative policy experiments as the deliberate choice for finding good new policy options (Potts 2010).

Schoeman et al. (2012) outline that public sector innovation means usually new services, processes or governance structures and contractual models. This shows that, similarly to private innovations, the public sector innovations tend to be multifaceted and diversified in nature. Luke et al. (2010) argue that public sector institutions and state-owned enterprises are becoming not only more innovative, but also more entrepreneurial in nature. Whereas, the entrepreneurship in public sector reflects conscious search for innovative change, new revenue sources and enhanced services in partnership with citizens. Innovations to achieve more efficient and effective solutions as well as organisational and strategy shifts in public sector are other signs of entrepreneurship. (Ibid)

The connection between entrepreneurship and innovations in public sector relates to the other aspects that might provide incentives and capabilities to innovate. Rosenblatt (2011), for example, analysis the usage of innovation awards in public sector from the perspective of individuals and organisations. His results indicate that despite several positive effects, such measures tend to have many negative consequences as well, including resentment and shift of focus to winning the award. Savory (2009) stresses the importance of converting knowledge translation capabilities of public service providers into the practice-based public innovations.

Thus, the public sector employees have considerable potential as technology and knowledge brokers facilitating the creation of public value. Salge and Vera (2012) outline yet another important factor that influences the benefits of public sector innovations, namely customer and learning orientation in public organisations. Both these orientations play an important role in increasing the quality of public services. The differences between private sector innovations and public sector innovations have been summarized by Estonian Development Fund. Table 1 offers the focal aspects of this comparison.

Table 1. The differences between private and public sector innovations

	Private sector	Public sector
Principal goals	Profits, stability and increased income	Policy implementation
Structure	Different size companies and possibilities for newcomers	Complex system of organisations with differing (somewhat contradicting) tasks
Performance measurement	Return on investments	Different performance indicators and goals depending on the field
Management	Some managers are independent; others have restrictions posed by stock holders, corporate control or resource limitations. Successful managers get well remunerated and promoted.	Tries to resemble private management practices, but actually subordinated to strict political control. Successful managers are often paid less than private managers on similar positions are.
Customer relations	Market may be business-to-consumer or business-to-business. Companies have different closeness with customers, but customer feedback is vital in final decisions about innovation.	Final customer is population considered citizens. The sector has adopted the market-based approaches and public is viewed as clients or consumers.
Supply Chain	Most companies belong to one or several supply chains organized by larger companies.	Usually public sector depends on private suppliers and is therefore an important market for companies
Employees	Personnel are very diverse and relations with management range from distrust to harmony. Companies try to establish loyalty and customer focus, but employees are often motivated economically by securing adequate income.	In several countries, public sector employees are often in labour and professional unions. Employees are usually interested in status and salary, but several join public service for idealistic reasons.
Knowledge sources	Companies are relatively flexible in buying in innovation related knowledge from consultants, associations and public researchers, but smaller companies might lack funds for it.	Despite large resources, some parts of public sector might restrict access to private knowledge sources (except suppliers). Public knowledge sources (universities) might be oriented to other parts of the public sector.
Time horizon	In several sectors short term, but in infrastructure can be very long term	As a rule short term: policy-based changes done within election period

Source: Estonian Development Fund (2008)

The links between private and public sector innovations are most obvious in supply chain and in knowledge sourcing. In the first case, the public sector innovations depend extensively on private supplies. In the latter case, the private innovations get required knowledge also from public sources. These two aspects as well as other initiatives (for example the use of private management practices or market-based logic in public organisations) suggest that innovations cannot always be strictly divided into private innovations and public sector innovations. Sometimes these two innovation types are highly interwoven and very collaborative in nature.

However, despite these similarities and links, Potts and Kastelle (2010) object the view that public sector innovations should be built on the models and best-practices from private sector. The incentive schemes in these sectors are different and the differences have to be taken into account. In addition, the learning from best-practices tends to provide problematic results even within private sector, because conditions differ. Yet, Smith and Starkey (2010) show with example how private sector governance methods can be suitable for implementing the innovations even in the public sector. Thus, there are various opinions about the appropriateness of private sector practices in the framework of public sector innovations.

Moore and Hartley (2008) focus specifically on the special category of public sector innovations, namely innovations in governance. They argue that innovative changes in public sector governance introduce network-based decision making between organisations as well as new financing and production systems. These innovations help to find new resources, manage private rights and responsibilities and influence value distribution. Much like public sector innovations in general, the innovations in governance should support public justice and societal development as well as efficiency and effectiveness. The governance aspect of knowledge sharing across organisational boundaries has been investigated by Pardo et al. (2001). They find that it is difficult to share tacit and interaction-bound knowledge across public agencies, which might have different practices and values. The policy and legal constraints as well as misaligned goals do inhibit the knowledge sharing between public organisations. Despite these detrimental influences, the knowledge sharing between public agencies is still possible and it must occur to support multi-organisational collaborative innovations.

Veggeland (2008) argues that public sector innovation in regulatory regimes, defined through the principles, norms, rules and decision-making procedures, are highly influenced by path dependence and administrative traditions. In the European Union, innovative governance on the national level is influenced by the supra-national EU level. Positive and self-reinforcing feedback from that higher level might set a path from which it is difficult to break out. In most cases, the path dependence represents lock-in to the past traditions and their continuation. As such, it represents a serious challenge in promoting the innovativeness among tradition-bound groups. Dodd et al. (2011) outline several problems related to EU level innovation policy, such as too narrow focus and failure to change. They propose comprehensive concept of total innovation that should integrate private or market innovations, social innovations and public sector innovations in the localised manner

to meet successfully the future challenges. The localised approach stresses the need to benefit from emerging initiatives instead of EU-wide subordination. The latter might indeed reinforce path dependence and reduce the reaction times.

The issue of collaborative innovations follows the suite of contemporary system models about innovations in the private sector. Sørensen and Torfing (2012) argue that public sector innovations are often not initiated simply by the supply factors or demand-side factors, including the role of public managers, politicians or private contractors as the initiators of public sector innovations. Instead, the modern public innovations tend to require collaboration between various social and political actors so that their differences are constructively managed. The collaborative innovations may involve contributions by private and public actors or at least by several government agencies, meaning collaboration within the public sector. Sørensen (2012) calls for the need to develop a collaborative view on the accountability, because it is natural to expect changes in accountability when the collaborative forms of governance are used. New Public Management (NPM) paradigm initiated since late 1970s makes politicians clearly accountable for policy innovations, but shares the accountability between public and private parties in case of service innovations. New collaborative governance requires mixed accountability standards. In short, the collaborative innovations introduce the need for shared accountability by public officials and other involved actors.

Micheli et al. (2012) analyze the possibilities to establish new business models in public sector collaboration with private companies. In that contribution, they summarize the types of contractual arrangements that public sector organisations typically use to cooperate with private sector. These arrangements are provided in Table 2.

Table 2. Contractual arrangements for public-private innovation collaboration

Name of the arrangement:	Nature of arrangement:
Outsourcing	External provider from the private sector takes over the delivery of a public sector service or function
Concessions	Public sector contract or permit that allows a private company to operate on other party's property
Private finance initiative	Partnership where the delivery of public services involves private sector investment into infrastructure
Joint venture	each party contributes resources and a new business is created in which the parties share the risks and benefits
Privatisation	The sale of public assets (fully or partially) to private individuals or companies
Commercialization partnership	The collaborative establishment of an income stream or generation of economic value from a tangible or intangible public-sector asset without detracting from its public-sector mission

Source: based on Micheli et al. (2011)

The arrangements differ in terms of the intellectual property management and ownership variation. In case of concessions, public partner would own the intellectual property and in case of outsourcing the private company. In case of commercialization partnership, the distribution of intellectual property rights tends to be object of negotiations between parties. (Micheli et al. 2012) The investigation of commercialization partnerships shows that they help to overcome barriers to the public sector innovation and benefit public sector, private partners as well as citizens. However, the success of these partnerships depends on the capacity and ability of parties to collaborate with each other and to focus on outcomes. Then private involvement can help to open up markets for collaborative public services. (Schoeman et al. 2012; Micheli et al. 2012)

Bienkowska et al. (2010) show how the collaborative interaction of private and public innovations takes place via semi-public organisations (for example research institutes) that involve industry, public universities and government. They argue that such diversity of actors as well as funding opportunities is very important element of a successful innovation system. Vogel and Frost (2009) suggest, based on the analysis of think tanks in Germany, that explicit rhetorical support by the important actors helps the public sector innovations to be widely recognised. These two examples indicate that public-private collaborations function as an influential tool in facilitating the public sector innovativeness and its acceptability in a society.

Grady and Chi (1994) stress the involvement of clients of agency services in the public sector innovation process. This shows that successful public sector innovations require customer orientation just as much as private innovations. However, higher level public organisations were not seen as very supportive groups in case of innovative changes. In some respect, this indicates that perhaps the most serious barriers to public sector innovations are not raised by objecting citizens or by potential private partners. The sector itself and intra-sectoral disparities between organisations and goals offer more challenges than external influences. Vigoda-Gadot et al. (2008) explore public sector innovations from perspective of citizens. Their findings on the basis of international respondents show that responsiveness, leadership and vision are important preconditions for public sector innovations, while such innovations influence directly and indirectly the trust in and satisfaction with public administration. Thus, among other risks, the public sector innovations involve considerable image related risks, but also image related rewards.

To conclude, the public sector innovations represent an important yet diverse sub-set of innovations in society for which there is growing need. Public sector innovations should in addition to efficiency seeking address the public good and increase public value. They are often interpreted based on models used in private sector, but because of the differences in incentive schemes and other characteristics this approach is debated and challenged. Public innovations involve numerous governance issues and potential barriers that include inter-organisational disparities and path dependence. Given that both parties have adequate capacities for knowledge sharing and collaboration towards outcome, public and private innovations can be successfully interwoven in order to reinforce each other by using various arrangements.

The demand-side innovation policy tools and public-private innovations

The recent economic crisis has shown that traditional public policy approaches and governance schemes may be in adequate for the sustainable growth. Benner (2012) argues on the basis of Nordic experiences that in addition or instead of financial rescue plans, more extensive policy changes are needed. Multilayer transformation of Finnish and Swedish economies in 1990s called for stringent macro economy, changes in social policies (including employment issues) and focal role for innovation policy. The view that innovations are very important for long-term growth of economies is shared by Janasz (2010). He stresses the need for well-balanced combination of industry level knowledge generation and improved access for capital as the elements of innovation policy. Paraskevopoulou (2012) considers the link between public policy and innovation. Even if public policies do not directly address innovation, they still have important implications to innovations by regulatory effects. Such non-technological regulatory policies can contribute to the achievement of innovation policy targets, while innovation policy tools can compensate for negative regulatory influences. Samara et al. (2012) find on example of Greece that the institutional conditions, as part of innovation policy, tend to have highest impact on innovation performance within national innovation system. This might be true for countries with similar innovation development score, including Estonia. Thus, the innovation policy has an important role in reshaping the growth perspectives of post-crises economies as do general regulatory aspects and institutional conditions.

However, from the perspective of economic doctrines Audretsch and Link (2012) argue that although Schumpeterian notions of innovation, entrepreneurship and creative destruction seem to be more popular policy guiding terms than ever, the actual reactions to economic downturn seem still follow neoclassical and Keynesian doctrines. Thus, the actual public policies do not sufficiently reflect the importance of innovations and entrepreneurship. Yet, these are very relevant for responding to the actual challenges of globalization.

The successful conversion to innovation-supporting public policies is likely to require knowledge diffusion, policy learning and policy innovation. These three aspects are closely linked. Autant-Bernard et al. (2013) warn, however, that knowledge diffusion about regional innovation policies is a complicated task, which requires an accurate knowledge of the local characteristics and region's comparative position among others. Then it is possible to create strategies for public-private, intra-inter firm, intra-inter industry and local-global knowledge flows. Borrás (2011) argues that policy learning takes place on the level of public officials, networks and policy communities, whereas the impact of learning on the innovation systems depends on the implementing capacities of relevant organisations. Marsden et al. (2011) combine the policy learning and policy innovation perspectives within the municipal level comparison. They conclude that policy innovations are closely link to learning and policy transfers, which are often motivated by strategic needs and

curiosity. In this process, the public officials use their trusted network of peers. The organizations with strong culture of learning build strong and broad networks too.

Zhu (2012) argues that local policy innovations and transfer of successful experiences to other localities has been characteristic to China's reform policies. He outlines the role of policy entrepreneurs in promoting the civic engagement and popularity of new innovative policies. Suwa and Jupesta (2012) see the policy innovation as an important tool for technology diffusion. Thus, they link the changes in the public sector policies to the facilitation of the private contribution towards new publicly desirable technologies (see also Pham at al. 2011). However, such connections are not always straightforward. Clarke (2011) claims that the net impact of competition policies on innovativeness of the companies is somewhat unclear. High level of competition creates the pressure from competitors to innovate, but it is likely to facilitate price competition as well, thus reducing economic returns from innovation. Empirical results suggested that stricter competition policies might facilitate the introduction of new products, but decrease the introduction of new processes. (Ibid.) This shows how the demand-side oriented public policies might have various and complex influences on the market situation.

Furthermore, Peters et al. (2012) found that unlike domestic technology-push innovation policies, which foster innovative output within national borders, the domestic and foreign demand-side innovation policies increase innovative output with considerable spillovers from nation to nation. Although, this could be seen as internationally positive phenomenon, the national politicians are predominantly interested in domestic demand and might have reduced incentive to use demand-side innovation policy measures. This result suggests a need for supranational demand-side policy schemes, to overcome the potential negative impact of cross-border spillovers on country-level political preferences. (Ibid.) Some policy issues, like the environmental protection and the sustainable usage of resources, which can be more diversely addressed with the demand-side policies (as suggested by Caviglia-Harris et al. 2003), are inherently more supranational than national in nature.

In Europe, the supranational policymaking is reflected by EU-level policies and guidelines. Recent reports suggest that innovation concept has evolved towards multi-layered openness and networking, which requires new approach to innovation policy (Renda 2012; Anvret et al. 2010). Anvret et al. (2010) propose that future innovation policy should be integrated, market-based and demand-driven, whereas the multi-level and yet coordinated innovation policies are connected with increased accountability for policy actions. This accountability relates to improved decision-making, measurement, monitoring and reviewing within the innovation support systems (Ibid.). Renda (2012) shows based on survey results that current innovation support policies are indeed perceived as too complicated and fragmented in nature. Majority of respondents (91%) found that EU could do much more to increase the demand for innovation for example by creating the special unified agency and by improving knowledge transfer and partnerships between sectors (Renda 2012). Multi-level innovation policy means that supranational policies work in alignment with regional and national level policies. Tanev et al. (2011) reflect Danish

experiences on integrating the paradigms of user-driven innovation, open innovation and value co-creation into innovation policies. They stress the relevance of innovation support, innovation networks, education-competencies, entrepreneurship and intellectual property protection as the areas of current innovation systems that have to be targeted with improved policy approaches. These policies have to be developed within the frameworks of national innovation systems. (Tanev et al. (2011) Thus, the increased need for demand-side innovation policy measures relates to the shifts in innovation paradigms that are adopted into the policy practice.

The demand-pull innovation theories stress that the ability to produce innovations is wide-spread, but innovations require the market opportunity, in other words demand. This market demand determines the resource allocations between various innovations. The modern innovations are not the results of supply push factors, as early views suggested. They are the result of complex interaction between supply push and demand pull. This enables to promote innovations by improving the demand conditions for innovative products, services and processes. That purpose is served by the demand-side innovation policies. (OECD 2011) The demand-side innovation policy measures are often linked to such policy aims like sustainability, energy efficiency, infrastructure or health care (Edler 2005). These aims of innovation policies combine the innovations' facilitation and societal values related to common good. The demand-side innovation policy is 'a set of public measures to increase the demand for innovations, to improve the conditions for the uptake of innovations and/or to improve the articulation of demand in order to spur innovations and the diffusion of innovations' (Edler 2009, p. 5).

These demand-side policies are used because the innovation policy needs to help overcome market and/or system failures. It is equally aimed at the realisation of societal goals and policy needs determined by policymakers. Countries often consider the industrial or economic policy that calls for the modernisation by innovations and tries to promote innovation production in local, national or regional companies as well as to create lead market potential.(see Edler 2009) Thus, the demand-side innovation policy has more to it than dealing with deficiencies of the market for innovative solutions and with the innovation initiation or diffusion problems. The policy needs and goals of politicians involve the risk of enacting biased solutions and potentially corruption. Transparent goal-setting and public accountability could help to reduce these dangers. The demand-side innovation policy tools are summarized on Figure 1.

Edler (2010) analyzes the conditions that characterize the lead markets. These include the signals that buyers demand innovative solutions, certain pressure from perceived problems in a market and the critical mass of demand. The economic ability of companies to pay higher entry costs, leading-edge regulations, learning and adaptation capabilities of suppliers, technological competencies for value creation and supportive services are important contributors too (Edler 2010). The demand for innovation-based solutions needs to be appropriately stimulated by lead market policies (Appelquist et al. 2009). The innovation policy should on the introduction of measures, including new ways of using the public procurement, and

support for user-driven innovation projects. The policy should be flexible and synchronised. This requires quick reaction to the problems, reduced complexity of the policy portfolio as well as wider policy scope. These policies focusing on the demand factors for innovation could facilitate the modernisation of economy and public services as well as accelerate the catching up process of less-developed countries or regions (Edler 2011).

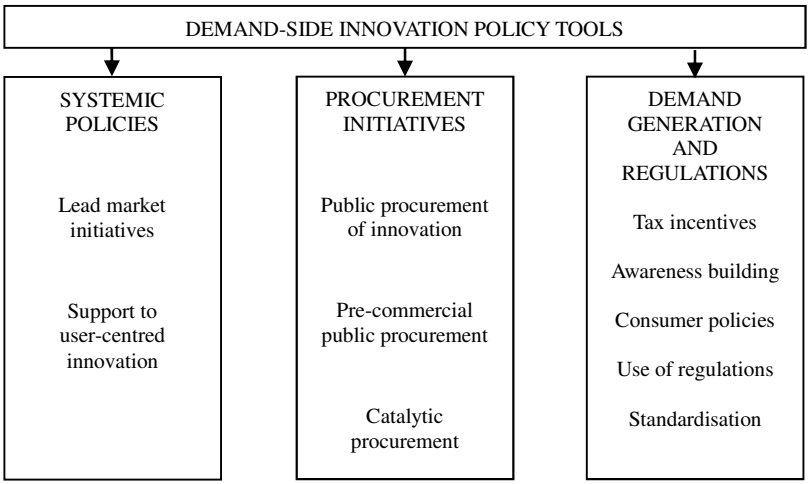

Figure 1. The demand-side innovation policy tools (Source: based on Izsak, Edler 2011, p. 6 and OECD 2011, p. 53).

Successful policy in support of innovations facilitates an increase in productivity by encouraging the companies to modernise and improve their production systems. Leading technologies and processes make the activities of companies and ultimately the entire economy more efficient. However, as the cross-border spillovers indicate (see Peters et al. 2012), an innovation support policy should be related with the analysis of domestic capabilities. In case the domestic innovative capabilities are low, the demand-side policies might contribute more to the import of innovative products and services than to the development of domestic innovations. Cross-border knowledge transfers are relevant too. The national-level innovation policies should still focus predominantly on creating the conditions for domestic innovations. (see also Edler, Georghiau 2007; Edler 2009)

Although the demand-side facilitation of innovations might seem to be a very contemporary idea, not all the tools used for such innovation policies are new. In 1970s and 1980s, the public procurement as a policy measure that can impact innovations was already analyzed. (Edler, Georghiou 2007) The modern approaches on subject are still offering a considerable contribution by introducing more integrative and interactive viewpoints. Each policy tool is discussed in a broader context to account for the general impact of the entire policy portfolio. Indeed, the

demand-side innovation policies have their own narrower focus, but they should be monitored and governed in the wider framework of economic policies.

The EU expert group led by Esko Aho outlined already in 2006 the need for demand-side innovation policy initiatives. The report concluded that harmonised regulations, standards, public procurement, intellectual property rights, and innovative culture are the five key issues to be addressed. (Aho et al. 2006) Aho report as well as other contributions (see Moran et al. 2007; Zuleeg et al. 2007 for details) indicate the EU-level call for better balance between supply-side and demand-side innovation policy measures.

Such policy shift requires increased focus on the demand-side measures. Yet, it would not mean a complete policy switch towards solely demand-side policies. Instead, the innovation policy mix should build on the complementarities between the supply-side and the demand-side instruments (Smits and Kuhlman 2004; Edler, Georghiou 2007). Izsak and Edler (2011) argue that in Europe there is a general trend towards the increased usage of demand-side approaches in the strategies and policies. The demand-side policies are now adopted by majority of EU countries. In several countries, it has become an explicit part of recent innovation strategies. However, most EU countries still give priority to the supply-side instruments. Thus, the demand-side policy measures are gradually adopted in the context of national R&D and innovation strategies with variable speeds but general trend is there. According to Izsak and Edler (2011), there is a certain danger that the demand-side innovation policy measures are adopted prematurely and with high transaction or learning costs. This tends to happen when new trends emerge in European policies.

In terms of demand-side policy tools, there is a clear focus on innovative public procurement and growing popularity describes pre-commercial procurement. However, Edquist and Zabala-Iturriagagoitia (2012) stress that the public procurement for innovation (PPI) should be clearly differentiated from traditional public procurement. The latter is aimed at purchasing of off-the-shelf products. Whereas, PPI focuses on the procurement of results in the form of solving societal problems or satisfying novel needs. Only PPI should be viewed as part of demand-side innovation policy mix. (Ibid.) This procurement tool should be used in combination with other innovation support measures to achieve more effective policy outcomes. In connection to the pre-commercial procurement, the European Commission (2008) states that its scope should be clearly on pre-commercial R&D services, it should apply risk-benefit sharing with private suppliers and it should be competitive in nature in order to exclude the possibility of state aid. As such, the pre-commercial procurement of problem solutions should facilitate public-private cooperation for innovation in the competitive, but still integrated, manner (European Commission 2008). The links with EU-level standards, procurement guidelines and industrial policy regulations indicate that the demand-side policy measures are indeed somewhat supranational. In that setting, the national R&D and innovation potential can be effectively supported by using agile systems and good responsiveness to changes in economy and business environment. This presumes public sector innovativeness, which is supported by demand-side policies and

subsequent collaboration with the private sector and non-government organisations. As was shown in previous section, the public procurement is one of the main links.

Gault (2012) brings in an important point about demand-side innovation policies by focusing on the fact that user innovations as well as public sector innovations are not oriented to the market in the strict sense of the word. It poses methodological challenges even or perhaps especially when market-based approaches are adopted, because then markets and demand formation tend to get broader meaning, which is potentially confusing. Strategic centres for science, technology and innovation introduced by Nikulainen and Tahvanainen (2009) offer an example of such multi-actor collaboration bodies, which are not necessarily market oriented. They tend to involve public support, user communities and private partners. Thus, not all demand-side innovation policy initiatives are strictly market oriented. Some of them seek to combine the market-based approach with public value and community benefits. This implies that demand-side innovation policies can incorporate the multi-purpose collaborative measures, which increase demand for innovations, but at the same time enhance the public sector capabilities for entrepreneurship, innovation and knowledge sharing.

To conclude, the demand-side innovation policies are important complements to the supply-side measures. These policies rely upon diverse tools, some of which facilitate not only private market for innovations, but also public sector capabilities to innovate. Thus, the demand-side innovation facilitation (perhaps the procurement initiatives and user-centred support activities in particular) serves as an important gateway between public sector and private sector innovations as well as between national and supranational policy levels. Now the author introduces some examples of demand generating public sector innovations from Estonia, based on public information, and then offers policy recommendations for improving the links between public innovations and demand-side innovation policies.

The examples of demand-side public innovations in Estonia

ICT innovation in Estonia

Estonia is known as the leading production site for Skype service as well as becoming known for other information technology solutions. The usage of ICT is common in public sector as well. Estonia was one of the early adopters of e-government solutions that enhance the decision-making processes. Estonian Tax and Customs Board has adopted elaborate e-taxation and e-customs systems. Based on digital identification, using ID card, these systems enable to file personal income tax declaration as fast as in approximately 30 seconds, because majority of information is pre-filled by integrated reporting systems, and average employee who has no major deductions to report has to just review the info and confirm. The filing of annual reports by companies into the business registry has been innovated as well. By now, the reports are submitted into the online form, which enables to process the data for various statistical and governance purposes without further need to enter it manually or to standardise it additionally. The shift to this solution required change

of procedural habits by entire private sector as well. Estonia intends to continue the focus on using the possibilities offered by ICT for increasing the governance efficiency. Recently former CEO of major software developer, focusing and public sector IT solutions, was appointed as the vice-chancellor of IT matters by the Ministry of Economic Affairs and Communications. He has also been the leader of ICT Association. This shows that policy makers in Estonia seek to improve the ICT based innovations by developing more systematic and integrated policy initiatives.

CO2 emission quota countertrade and ideas for public innovations

Interesting source for public sector innovation projects in Estonia has been the CO2 trade. Because these deals are based on the non-monetary exchange, Estonian officials came to an idea to use the quota sold to Mitsubishi Corporation for providing social workers in Estonian municipalities with 500 electric vehicles as well as to build the nation-wide network of charging stations and offer monetary support for non-public buyers of electric vehicles by paying up to half of the price. This project has been perhaps one of the largest initiatives in support of electric transport by public sector. The social workers have adopted these vehicles relatively well. Even winters did not produce major setbacks. However, private interest in these vehicles remains low despite the price support. There is one small company in second largest city Tartu that started taxi services using Nissan Leaf electric vehicles. The network of charging stations was built on the basis of public procurement contract won by Scandinavian multinational ABB. In Tartu there is emerging public-private partnership with the municipal transport partner company for using biogases produced from sewage waste as the fuel in city buses. Other important deals involve the project for purchasing new modern and energy efficient streetcars as well as large scale housing renovation program towards energy savings on heating during the wintertime. However temporary such deals might be, they still have certain long term effect in terms of experiences with innovative ideas.

Municipality funded public transport system for the city residents

Since January 2013, the capital of Estonia Tallinn stopped asking transportation fee in the form of tickets from the resident taxpayers who use public transport. This means that for the residents of Tallinn the public transport system is fully covered from municipal budget and only visitors are obliged to purchase tickets. Yet, in order to determine the residency status of passengers, the local government supported an investment into innovative electronic validation system. Thus, residents are now required to have the validation card and validate each journey by brushing it over the controller. There is an important political side effect to this novel idea. Namely, the discrimination based on residency status might encourage people to become official residents of Tallinn even in post-urbanisation situation, when they actually live in small municipalities nearby and migrate to work in Tallinn. In Estonia, the citizen's residency status determines the municipality to where the share from income tax revenues is allocated. Thus, the capital looses certain amount of ticket revenues, but might even gain budget revenues from the increase in official city population. The role of public transportation in Tallinn has

been facilitated by marking down the extensive network of priority bus lines that increase the speed of public transport services, while potentially reducing the benefits of private vehicles in congested areas. This example illustrates very well the multi-purpose nature of certain public sector innovations, whereas it has strong elements of creating shift in private demand.

Research and Innovation Policy Monitoring Programme and popularisation aspect

In 2011, Estonian Ministry of Education and Science launched the Research and Innovative Policy Monitoring Programme from 2011 to 2015. This programme contains seven larger work packages and numerous smaller studies (see TIPS homepage 2013) made in close cooperation between the University of Tartu and Tallinn University of Technology, which are the two largest public universities in Estonia. However, it is not so much the programme itself that is innovative, but the reporting and governance structure. Each study is related to the frequent knowledge sharing with public officials from the Ministry in the form of research seminars.

These seminars are not solely reporting meetings between the interested public party and the service provider. The frequency of meetings helps to evolve them into mutual knowledge sharing experiences where public policy makers can pinpoint their knowledge gaps and prioritised knowledge inputs. It does not mean politically biased research results, but refined aims of collaboration for monitoring purposes.
Private sector enters into the mix as well, because in case of several studies, the companies or industry associations are extensively used as providers of input data. Thus, universities function as innovative gatekeepers and knowledge translators between the business sector and public sector officials.

Sadly, the Ministry of Economic Affairs and Communications is less involved into this knowledge exchange programme, but it fosters the public-private partnership by mentoring the competition of infant innovative business ideas called 'Ajujaht' (brain hunt) through its executive agency Enterprise Estonia. Albeit the sustainability and development of this very public awareness building event is warranted by public involvement, the education within the competition relies considerably on the private sponsors and business leaders as corporate mentors. The longevity of this initiative is important in order to build successfully on the experiences of earlier years as well as to portray the evolvement of innovation networking and know-how over time.

Suggestions for linking the public sector innovations and demand-side policies

Despite these positive examples, the Estonian R&D and innovation policy in general is still dominated by supply-side policy measures. Cunningham (2009) argues that Latvia and Lithuania seem to have ongoing policy debate about demand-side innovation policy measures, but Estonia does not. There are initiatives of public procurement for innovation that include changes in the regulatory environment and subsidies to boost the usage of local energy resources, the collection of used packages, wind energy production and changes in waste collection. However, these reflect often the impact of EU-level policies on local standards. They are not

innovative or unique in the international context, but still new in the local setting. The results of this analysis and the examples of policy practices in Estonia allow making the following recommendations for policy development.

Public sector innovation initiatives in Estonia could benefit from increased customer and learning orientation by public organisations, including ministries and public agencies. Customer orientation does not refer to strictly market-based view in the public policy procedures, but to gaining the broader understanding about the needs of users. Learning orientation suggest that public officials as well as organisations should acquire knowledge and capabilities from more open interaction with other actors. Thus, the user-centred and open innovation paradigms suggest the increased need for public-private networking.

The public procurement initiatives should be even more devoted to solution seeking properties that enhance innovative capabilities and entrepreneurial incentives of all involved parties. The interactive problem solving process tends to be by nature more innovative than adoption of off-the-shelf solutions. In this process, the public sector can provide the tools for socially desirable outcomes, which are not always marketable in commercial terms. The private suppliers introduce potentially the element of capability building and competitive strive to excellence into such interactive procurement process.

The competitive pre-commercial procurement of R&D services seems to be a great policy tool to facilitate the risk-benefit sharing between public sector and private partners. It requires, however, the advances in intellectual property rights distribution practices among partners. Therefore, it is relatively high risk policy tool in terms of potential legal conflicts about the fruits of collaboration. Yet, these pre-commercial initiatives represent a direct link between public sector innovativeness and increase in demand for private R&D contributions. As such, the pre-commercial procurement is likely to advance the development capabilities of all parties involved.

Similar opportunities and challenges relate to commercialisation partnerships between public agencies and private collaboration partners. The negotiations about intellectual property rights allocation might be even more complicated, because commercialisation phase involves already identifiable value streams. Given that such partnerships are aimed at additional value offerings, which do not set the core public value provision in danger, they are still recommended. However, the intellectual property rights distribution remains focal political issue that might either facilitate, if done mutually agreeably, or inhibit the execution of last two policy suggestions. The relatively small experience in this field of public-private negotiations in Estonia could be viewed as considerable development gap.

There is a need for more integrated approach towards using the demand-side innovation policy tools in combination with public sector innovations. This suggests that the governance should be more flexible and not locked-in to the path dependence of particular public agency. Therefore, public policy should encourage collaborative projects between various public agencies that deliberately disregard

their traditional subordination in order to facilitate inter-organisational knowledge sharing and supra-organisational teamwork. It is easier said than done, but potential benefits of new innovative policy networks are likely to outweigh the efficiency-seeking properties of well-settled policy routines.

The link between public sector innovations and demand-side innovation policies could be strengthened by adopting latter as well-defined multi-purpose tools. For example, the awareness building measures could address public as well as the public sector officials in particular. By combining these external and internal policy perspectives, the sectors gain an improved understanding of each other's incentive schemes. This facilitates successful collaboration. At first, the multi-purpose use might seem as potential source for confusion, but in time, the layered nature of various demand-side policy measures will help to leverage the public sector capabilities in a refined manner.

The demand-side innovation policies are characterised by international spillovers. This suggests that the national-level policies should be streamlined with supranational and regional initiatives. However, the public sector should apply 'think global act local' approach, instead of imitating best practices without sufficient localisation. The networking for policy transfers is important as well, but the policy and/or service innovations require more recombinant transfer of elements in order to find most effective match with local demands. Recombination means that it is the policy elements, which have to be understood, scrutinised and perhaps rearranged in locally more suitable fashion.

The demand-generating public sector innovations should be based on the private sector paradigms about collaborative innovation, but in an elaborated fashion by integrating public sector incentive schemes into these models. Thus, such innovations involve much more complex and intricate layouts than solely private collaborations. Yet, without the incorporation of public sector incentives into the private demand facilitation, the good intentions are likely to run into serious execution problems simply because of long-term misalignment with the logic of public policies.

The primary success factor for diffusing the impact of private sector innovations into public sector and vice versa, seems to be the ability of various actors to communicate and transfer knowledge. That is why the collaboration and learning are in the spotlight of these policy recommendations.

Conclusions and implications

The public sector has been seen as bureaucratic, rigid, inefficient and resistant to changes. However, the modern challenges and the increased need for public services have forced it to seek new innovative ways. The public sector innovations represent a diverse set of multi-purpose innovations in a society. These innovations address not only efficiency and effectiveness, but also public good and increase public value. The models used for private innovations are applied to public sector innovations as

well, but because of the differences in incentive schemes, this approach is debated. There are various governance issues and barriers to public sector innovations, like for example inter-organisational disparities and path dependence. If public and private partners have adequate capacities for knowledge sharing and collaboration towards outcome, then public and private innovations can be linked and reinforced.

The modern economic policy for growth should rely more upon paradigms that involve entrepreneurship and innovation policies. This requires knowledge diffusion, policy transfer and policy innovation, whereas the policy innovation is an important tool for technology and demand generation. The demand-side innovation policies are complex policies with potential side effects and spillovers, but important complements to the supply-side measures. The demand-side policy measures are diverse. They facilitate not only the private market for innovations, but also public sector capabilities to innovate. The demand-side innovation facilitation, via the procurement initiatives and user-centred support in particular, is an important link between the public sector and private sector innovations. The demand-side measures connect also the national and supranational policy levels in the framework of EU.

In Estonia, there are several examples of public sector innovations with demand-side effects, including user-centred ICT solutions, environmental projects, municipal transport innovations and knowledge sharing/awareness building initiatives. In general, however, the innovation policy is still too focused on supply-side measures. The policy recommendations include increase in customer and learning orientation of public organisation (see also Grady, Chi 1994; Salge, Vera 2012), public procurement in the form of solution seeking (see also Edquist, Zabala-Iturriagagoitia 2012), competitive pre-commercialisation and commercialisation partnerships with risk-benefit sharing (see also European Commission 2008; Schoeman et al. 2012; Micheli et al. 2012), collaborative projects between public agencies to foster integration (see Pardo et al. 2001), multi-purpose demand-side measures aimed simultaneously at external (society) and internal (public sector) changes, recombinant policy transfers with local adaptation (see also Autant-Bernard et al. 2013), adjusted underlying paradigms (see also Potts, Kastelle 2010).

The limitations of this study relate to the fact that public sector innovation discourse and innovation policy discourse have some overlapping aspects, which might lead to certain cause and effect confusions in interpretation. There is no sufficient empirical evidence about the pre-planned multi-purpose use of some demand-side measures.

The theoretical implications relate to a fact that the demand-generating public sector innovations offer a new path for scientific discourse that addresses the versatile and complex nature of demand-side innovation policy measures as the vital elements for the public sector innovations that require public-private collaboration.

The managerial implications relate to numerous business opportunities offered by the pre-commercialisation and commercialisation public-private partnerships that might help to create intellectual property valuable beyond the national borders.

The future research should focus on the analysis of negative and positive effects or spillovers that occur by using the demand-side innovation policy measures. The possibilities for localised demand-side policy measures should be studied as well.

References:

1. **Aho, E., Cornu, J., Georghiou, L., Subira, A.** (2006), Creating an Innovative Europe. Report of the Independent Expert Group on R&D and Innovation appointed following the Hampton Court Summit
2. **Anvret, M.; Granieri, M.; Renda, A.** (2010), A New Approach to Innovation Policy in the European Union, Innovation Policy: Boosting EU Competitiveness in a Global Economy, CEPS Task Force Report, 8 July 2010.
3. **Appelquist, J.; Bell, L.; Zabala, J. M.** (2009), Research and Innovation Policies – Exploiting Synergies for Sustainable Growth in Europe, Seminar Report
4. **Audretsch, D. B.; Link, A. N.** (2012), Entrepreneurship and Innovation: Public Policy Framework, The Journal of Technology Transfer, 37(1), pp. 1-17.
5. **Autant-Bernard, C.; Fadario, M.; Massard, N.** (2013), Knowledge Diffusion and Innovation Policies within the European Regions: Challenges based on Recent Empirical Evidence, Research Policy, 42(1), pp. 196-210.
6. **Benner, M.** (2012), Innovation Policy in Hard Times: Lessons from the Nordic Countries, European Planning Studies, 20(9), pp. 1455-1468.
7. **Bienkowska, D.; Larsen, K.; Sörlin, S.** (2010), Public-Private Innovation: Mediating Roles and ICT Niches of Industrial Research Institutes, Innovation: Management, Policy and Practice, 12(2), pp. 206-216.
8. **Bland, T.; Bruk, B.; Kim, D.; Lee, K. T.** (2010), Enhancing Public Sector Innovation: Examining the Network-Innovation Relationship, Public Sector Innovation Journal, 15(3), pp. 1-25.
9. **Borrás, S.** (2011), Policy Learning and Organizational Capacities in Innovation Policies, Science and Public Policy, 38(9), pp. 725-734.
10. **Caviglia-Harris, J. L.; Kahn, J. R.; Green, T.** (2003), Demand-side Policies for Environmental Protection and Sustainable Usage of Renewable Resources, Ecological Economics, 45(1), pp. 119-132.
11. **Clarke, G. R. G.** (2011), Competition Policy and Innovation in Developing Countries: Empirical Evidence, International Journal of Economics and Finance, 3(3), pp. 38-49.
12. **Cunningham, P.** (2009), Demand-side Innovation Policies, Pro Inno Europe Policy Brief, 1, pp. 1-15.
13. **Dodd, J. A.; Franke, J.; Moody, R.** (2011), Total innovation - Towards a Localised, Comprehensive EU Innovation Policy, Public Sector Innovation Journal, 16(2), pp. 1-18.
14. **Edler, J.** (2005), Demand Oriented Innovation Policy, Innovation and Procurement Workshop, Manchester
15. **Edler, J.** (2009), Demand Policies for Innovation in EU CEE Countries, The Workshop Innovation for Competitiveness INCOM, Prague

16. **Edler, J.** (2010), Demand Oriented Innovation Policy, In: Smits, R, Kuhlmann, S., Shapira, P., (Eds.), The Theory and Practice of Innovation Policy An International Research Handbook, Edward Elgar: Cheltenham
17. **Edler, J.** (2011), Innovation in EU CEE: the role of demand-based policy, In: Radosevic, S., Kaderabkova, A. (Eds.) Challenges for European Innovation Policy. Cohesion and Excellence from a Schumpeterian Perspective. Edward Elgar: Cheltenham, Northhampton, pp. 177-208.
18. **Edler, J.; Georghiou, L.** (2007), Public Procurement and Innovation—Resurrecting the Demand Side, Research Policy, 36(7), pp 949-963.
19. **Edquist, C.; Zabala-Iturriagagoitia, J. M.** (2012), Public Procurement for Innovation as Mission-Oriented Innovation Policy, Research Policy, 41(10), pp. 1757-1769.
20. **Estonian Development Fund** (2008), Innovation in the Public Sector: Literature Review, pp. 1-16 (In Estonian)
21. **European Commission** (2008), Pre-Commercial Procurement: Driving Innovation to Ensure High Quality Public Services in Europe, Luxembourg: Office for Official Publications of the European Communities, pp. 1-27.
22. **Gault, F.** (2012), User Innovation and the Market, Science and Public Policy, 39(1), pp. 118-128.
23. **Grady, D. O.; Chi, K. S.** (1994), Formulating and Implementing Public Sector Innovations: The Political Environment of State Government Innovators. Public Administration Quarterly, pp. 468-484.
24. **Izsak, K.; Edler, J.** (2011), Trends and Challenges in Demand-Side Innovation Policies in Europe, Thematic Report 2011 under Specific Contract for the Integration of INNO Policy TrendChart with ERAWATCH (2011-2012), http://ec.europa.eu/enterprise/newsroom/cf/_getdocument.cfm?doc_id=7011, Technopolis (last access 06.02.2013)
25. **Janasz, K.** (2010), Innovations and Development, Perspectives of Innovations, Economics and Business, 6(3), pp. 27-30.
26. **Luke, B.; Verreynne, M. L.; Kearins, K.** (2010), Innovative and Entrepreneurial Activity in the Public Sector: The Changing Face of Public Sector Institutions, Innovation: Management, Policy and Practice, 12(2), pp. 138-153.
27. **Marsden, G.; Frick, K. T.; May, A. D.; Deakin, E.** (2011), How Do Cities Approach Policy Innovation and Policy Learning? A Study of 30 Policies in Northern Europe and North America, Transport Policy, 18(3), pp. 501-512.
28. **Micheli, P.; Schoeman, M.; Baxter, D.; Goffin, K.** (2012), New Business Models for Public-Sector Innovation: Successful Technological Innovation for Government, Research-Technology Management, 55(5), pp. 51-57.
29. **Moore, M.; Hartley, J.** (2008), Innovations in Governance, Public Management Review, 10(1), pp. 3-20.
30. **Moran, N.; Hudson, R. L.; Wrobel, P.; Valigra, L.** (2007), Innovation: The Demand Side, SienceBusiness - http://www.sciencebusiness.net/documents/demandside.pdf (last access 04.04.2012)
31. **Nikulainen, T.; Tahvanainen, A. J.** (2009), Towards Demand Based Innovation Policy? The Introduction of SHOKs as Innovation Policy Instrument, ETLA discussion paper,1182, pp. 1-19.

32. **OECD** (2011). Demand-side Innovation Policy. OECD Publishing. Paris – http://www.oecd.org/document/61/0,3746,en_2649_33703_48078845_1_1_1_1,00.html (last access 06.02.2013)
33. **Paraskevopoulou, E.** (2012), Non-Technological Regulatory Effects: Implications for Innovation and Innovation Policy, Research Policy, 41(6), 1058-1071.
34. **Pardo, T. A.; Cresswell, A. M.; Zhang, J.; Thompson, F.** (2001), Interorganizational Knowledge Sharing in Public Sector Innovations, In: Annual Conference of the Academy of Management, Washington DC, and to be published in the Best Paper Proceedings. August
35. **Pham, K. T.; Nguyen, M. B.; Nguyen, H. D.** (2011), Energy Supply, Demand, and Policy invite Nam, with Future Projections, Energy Policy, 39(11), pp. 6814-625.
36. **Peters, M.; Schneider, M.; Griesshaber, T.; Hoffmann, V. H.** (2012), The Impact of Technology-Push and Demand-Pull Policies on Technical Change – Does the Locus of Policies Matter?, Research Policy, 41(8), pp. 1296-1308.
37. **Potts, J.** (2009), The Innovation Deficit in Public Services: The Curious Problem of Too Much Efficiency and Not Enough Waste and Failure, Innovation: Management, Policy and Practice, 11(1), pp. 34-43.
38. **Potts, J.** (2010), Innovation by Elimination: An Experimental Approach to Public Sector Innovation, Innovation: Management, Policy and Practice, 12(2), pp. 238-248.
39. **Potts, J.; Kastelle, T.** (2010), Public Sector Innovation Research: What's Next?, Innovation: Management, Policy and Practice, 12(2), pp. 122-137.
40. **Renda, A.** (2012), The Power of Simplicity: Toward a Smarter and Streamlined Innovation Policy in the EU, CEPS Special Report, 23 May 2012.
41. **Rosenblatt, M.** (2011), The Use of Innovation Awards in the Public Sector: Individual and Organizational Perspectives, Innovation: Management, Policy and Practice, 13(2), pp. 207-219.
42. **Salge, T. O.; Vera, A.** (2012), Benefiting from Public Sector Innovation: The Moderating Role of Customer and Learning Orientation, Public Administration Review, 72(4), pp. 550-560.
43. **Samara, E.; Georgiadis, P.; Bakouros, I.** (2012), The Impact of Innovation Policies on the Performance of National Innovation Systems: A System Dynamics Analysis, Technovation, 32(11), pp. 624-638.
44. **Savory, C.** (2009), Building Knowledge Translation Capability into Public-Sector Innovation Processes, Technology Analysis and Strategic Management, 21(2), pp. 149-171.
45. **Schoeman, M.; Baxter, D.; Goffin, K.; Micheli, P.** (2012), Commercialization Partnerships as an Enabler of UK Public Sector Innovation: the Perfect Match?, Public Money and Management, 32(6), pp. 425-432.
46. **Smith, M. A.; Starkey, A. P.** (2010), The Utilisation of Private Sector Governance Paradigms for the Development and Implementation of Innovations in the Public Sector, International Journal of Innovation Science, 2(3), pp. 103-111.

47. **Smits R.; Kuhlmann S.** (2004), The Rise of Systemic Instruments in Innovation Policy, International Journal of Foresight and Innovation Policy, 1(1-2), pp. 4-32.
48. **Sørensen, E.** (2012), Measuring the Accountability of Collaborative Innovation, Public Sector Innovation Journal, 17(1)
49. **Sørensen, E.; Torfing, J.** (2012), Introduction: Collaborative Innovation in the Public Sector, Public Sector Innovation Journal, 17(1), pp. 1-14.
50. **Suwa, A.; Jupesta, J.** (2012), Policy Innovation for Technology Diffusion: A Case-Study of Japanese Renewable Energy Public Support Programs, Sustainable Science, 7(2), pp. 185-197.
51. **Tanev, S.; Knudsen, M. P.; Bisgaard, T.; Thomsen, M. S.** (2011), Innovation Policy Development and the Emergence of New Innovation Paradigms, Technology Innovation Management Review, (November 2011), pp. 14-19.
52. **TIPS Homepage** (2013), - http://www.tips.ut.ee/eng/? (last access 06.02.2013)
53. **Veggeland, N.** (2008). Path Dependence and Public Sector Innovation in Regulatory Regimes, Scandinavian Political Studies, 31(3), pp. 268-290.
54. **Vigoda-Gadot, E. R. A. N.; Shoham, A.; Schwabsky, N.; Ruvio, A.** (2008), Public-Sector Innovation for Europe: A Multinational Eight-Country Exploration of Citizens Perspectives, Public Administration, 86(2), pp. 307-329.
55. **Vogel, R.; Frost, J.** (2009), Innovating in the German Public Sector: How a Think Tank Frames the Debate on NPM, Public Sector Innovation Journal, 14(2), pp. 2-21.
56. **Zhu, Y.** (2012), Policy Entrepreneur, Civic Engagement and Local Policy Innovation in China: Housing Monetarisation Reform in Guizhou Province, The Australian Journal of Public Administration, 71(2), pp. 191-200.
57. **Zuleeg, F.; Green, J.; Schubert, C. B.** (2007), Cultivating a Market for Innovation in Europe, Policy Brief, European Policy Centre

SCATTER VIEW ON EUROPEAN TAX STRUCTURES

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Abstract

The paper analyses European Union countries tax structure changes during the last decade. Particular interest is related with correlations between tax structure and economic growth. There is argued, that the tax structure has an important impact on growth. The EU Commission proposes to shift tax burden from labor taxation to consumption to stimulate growth. However, is the tax structure and economic growth really related? The paper brings out structural changes in EU countries tax structures and impact of taxation to growth.

Keywords: taxation, tax structure, indirect and direct taxation, social security contributions, European Union

JEL Classification: H11, H2, H24, H25

1. Introduction

Since the beginning, the EU tax policies have concentrated on the "elimination of tax obstacles to all forms of cross-border economic activity, in addition to continuing the fight against harmful tax competition" (European Commission 2006). The Commission's tax policy strategy sets, that there is no need for the harmonization of direct tax systems; but mainly indirect taxes which may create an instant obstacles to the common market functioning (*ibid.*)

Deep economic recession in 2009-2010 and critical sovereign debt levels have forced the European Union countries rethink also their tax systems effectiveness. Taxes supposed not only to facilitate smooth Union-wide trade activities, but also should generate proper public revenue and not to harm economic growth.

One of the aspects of taxation improvements is related with modifications in tax structures. The Commission invites to improve taxation through "more growth-friendly tax structure" which means shifting tax burden from "labor to consumption" (European Commission (2011a, p.4-5). Therefore, the EU tax strategy expects increase the "quality of taxation". Instead of labor activities, more should be burdened consumption; environmental resource use and housing. The EU Commission brings out that those taxes introduce fewer distortions or make less harm on economy than labor and income taxes (European Commission 2011c, p. 52).

However, studies on taxation structures are relatively new area of academic research. Theoretical foundations for functional tax structure were first given by Atkinson and Stiglitz (Atkinson A. and Stiglitz J, 1976). Later on several authors

have widened the understanding tax mix discussions ((Martinez-Vazquez & others). Various international institutions also have studies attention on optimality of taxation structure (European Commission (2012); OECD 2012).

Academic discussion focus over efficient taxation structure should be kept separate from debates over particular taxes individual characteristics. Comparing individual taxes, there are argued that income taxes are more damaging for the growth than consumption or environmental taxes (e.g. Myles 2009; Johansson 2008). On the other hand, income taxation progressivity allows better to address redistribution purposes.

Does it mean, what a country can replace all "harmful taxes" with "growth friendly" taxes? This is definitely nonsense! However, there are no theoretical and empirical studies available, which bring out exact proportions for optimal tax structure. Tax structure is rather country specific issues and depends on particular circumstances and stage of economy.

Therefore, optimal tax structure is a complex issue. Different taxes inevitably should be used due to achieve society's goals. Individual taxes characteristics should be efficiently combined to accomplish both economic growth and redistribution.

2. Methodology and terminology

What is a tax structure? There are several widely recognized classifications of taxes (e.g. provided by OECD or European Union). In this text taxes are structured on the basis of ESA95 classification (European Commission 2011b, Annex B).

Structured by their type, there are taxes on production and imports (indirect taxes); current taxes on income and wealth and capital taxes (direct taxes); and compulsory social security contributions (SSC).

Indirect taxes are value added tax (VAT); excise duties (*e.g* on alcohol and tobacco) and other consumption related taxes.

Another classification of taxes structures is by their economic function. Here the taxes are classified by the base of taxes. There are four bases for taxation – consumption, labor, capital and use of environment. In large, consumption taxes are in large equal with indirect taxes. Labor taxes are summarizing personal income taxes and social security contributions. Characteristics of tax base provide important information about allocation of tax burden over economic activities and taxable sources.

The following paper will analyze European Union countries tax structures during the last decade. The main focus is to bring out changes in the tax structures over the decade and demonstrate relationship between tax structures and growth. Country's tax structure indicates relative distribution of taxes into different tax types and over taxation bases. Such a taxes distribution (e.g. by types) also named as "tax mix". In

this text the phrase “tax structure” applies for two aspects – particular taxes are compared with GDP level or share of a particular tax in total tax revenues.

The analyses are used data of the EU countries during the period 2000-2010; all data is provided on *Eurostat* Homepage. The data panel consist 27 European Union countries plus Norway and Iceland.

For the calculations is used *Excel* spreadsheet graph-builder. There is constructed scatter graphs and added trend line (regression) and displayed R^2 as a measure of the fit[1]. The linear graph line is preferred; however, if R^2 improves significantly (more that 5 percentage points), the different form line (polynomial) is chosen. In this level of analysis the regressions significance is not estimated; the purpose of the study is bring out general form of relationships and mark traces of following empirical studies. To avoid random short term fluctuations in data, there is calculated by the author aggregated data for the certain periods.

In the calculations is used as proxy for the income level ‘*GDP product at market prices per capita’* in euros and particular taxes absolute amount and tax ratios over all EU countries.

3. General tax developments

During the last decade, the EU countries total tax burden has been rather stable (Figure 1).

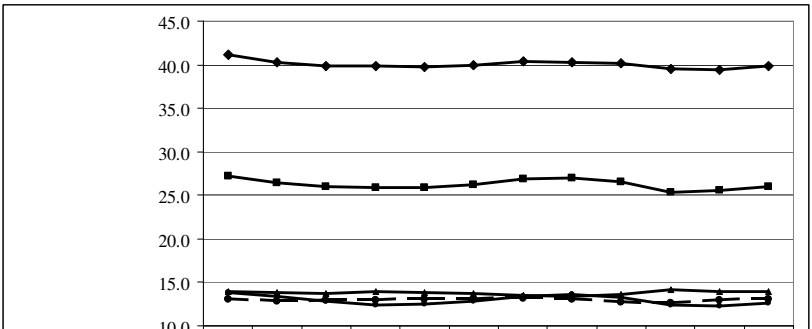
The total tax burden (incl. SSC) fluctuated around 40% as compared with GDP level. Taxation burden has slightly declined during the period

In 2011, indirect taxes reached 13.1% as GDP level; accordingly, direct taxes were 12.6% and SSC sum was 13.9%. Similarly to the total tax burden, those taxes proportions were relatively stable as compared with GDP.

Figure 2 demonstrates relationship between tax burden and long term economic growth. During the decade, the countries with lower initial tax burden have grown clearly faster. However, the relationship is not linear and there are significant outliers from that rule.

Figure 3 presents the correlations between taxation levels at the beginning and at the end of the period. There is a very high correlation between those two periods. However, the slope value different from 1 indicates the change in particular taxation level and share in total taxes during the period.

[1] **R^2** alue is a number from 0 to 1, that reveals how closely the estimated values for the trendline correspond to actual data. **R^2** presented in the paper is directly related with correlation coefficient **r**.



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Taxes and SSC	41.1	40.3	39.8	39.8	39.7	39.9	40.4	40.3	40.2	39.6	39.5	39.9
Taxes	27.2	26.5	26.1	25.9	25.9	26.3	26.9	27.0	26.5	25.4	25.5	26.0
Direct taxes	13.8	13.4	12.8	12.5	12.5	12.9	13.4	13.6	13.3	12.4	12.4	12.6
Indirect taxes	13.1	12.9	13.0	13.0	13.1	13.1	13.2	13.1	12.7	12.7	13.0	13.1
Social contributions	14.0	13.8	13.7	13.9	13.8	13.7	13.5	13.4	13.7	14.1	13.9	13.9

Figure 1. Total taxes and SSC as percentage of GDP (EU27+2) (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations).

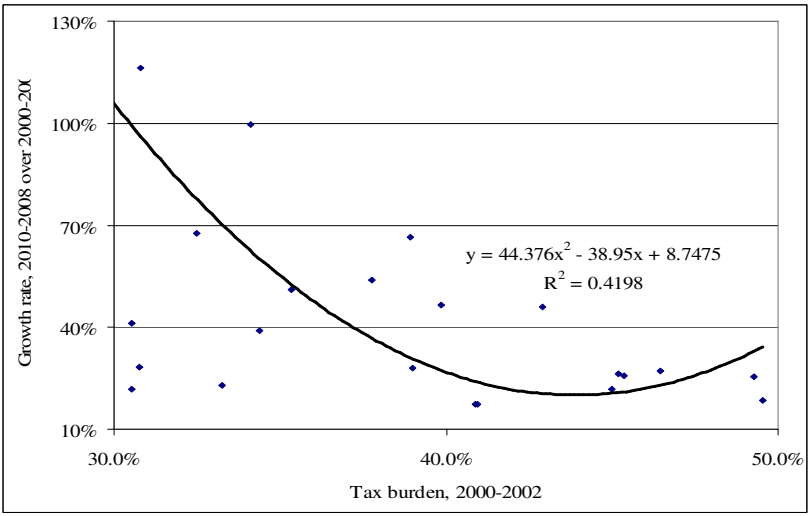


Figure 2. GDP growth (2008-2010 as compared 2000-2003) and tax initial tax burden (tax base 2000-2003) (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations).

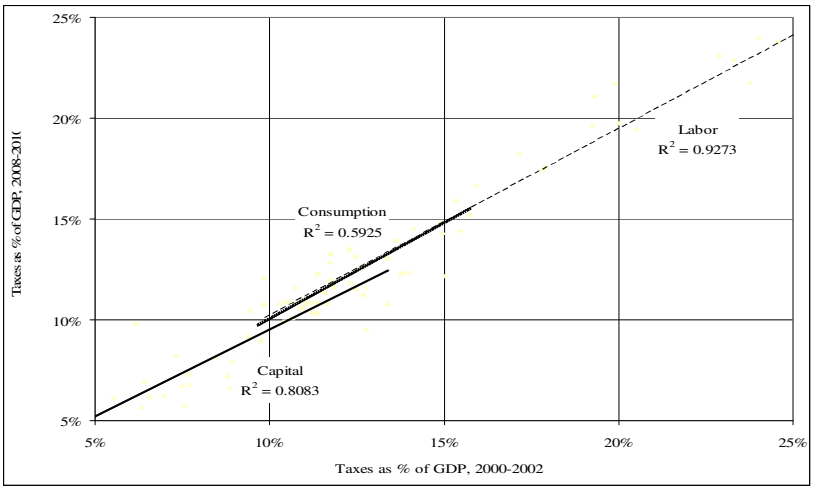


Figure 3. Taxes as % of GDP (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations).

There is an almost a perfect correlation between labor and capital taxation level over the period; somehow lower correlation is calculated on consumption taxes. That means, that the countries with high/low level of labor or capital taxation at the beginning of the period were about the same situation at the end of the decade. A smaller R^2 on consumption taxes compared with labor and consumption gives a signal, that situation in use of consumption taxation is little more diverse. Countries with high/low level of consumption taxation at the beginning of the period are not necessarily in the same situation at the end of the decade.

Relatively to the GDP, the labor and capital taxes have decreased during the period as slope of the trend line is less than 1. At the same use of consumption taxation as compared with GDP has remained about the same.

The Figure 4 presents the structural changes in taxation during the decade. Again, there is very close correlation between taxation structure at the beginning and at the end of the decade. The taxes trendline slopes indicate, that consumption taxes reached the bigger proportion of the total taxation (slope more than 1); at the same time labor and capital taxes have slightly lost their position in total taxation. One can say that the situation fits with the EU tax policy goals – shift tax burden from labor to consumption!

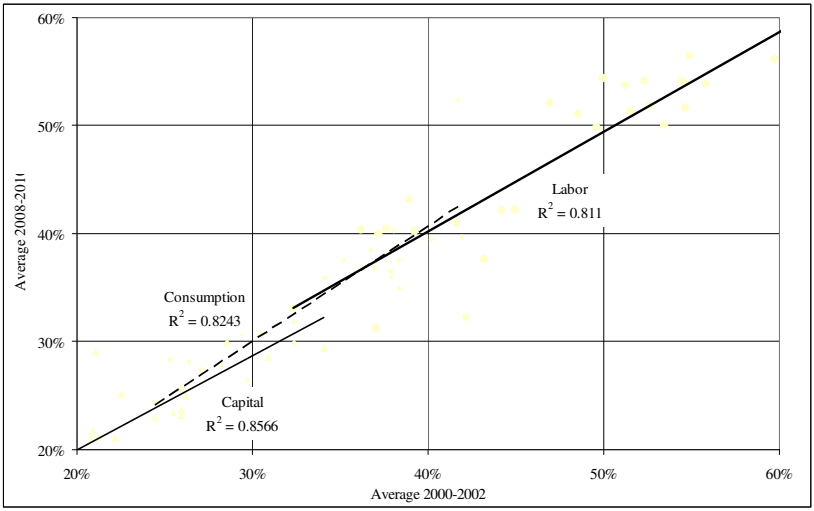


Figure 4. Taxes as % of total taxes (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations).

4. Taxes and income level

Figure 6 demonstrates a relationship between the income level of and GDP level *per capita.* There is a rather strong and positive correlation between income and taxation. That means - more the income level is in a country – higher tax level is in it.

There are presented regression lines, demonstrating tax and income level relationship at the beginning and end of the period. During the decade, the correlation strength between income level and tax burden across the EU remained about the same magnitude. Fast increase of GDP levels in the new EU member states and income leveling with old member countries, however, did not equalize taxation level across Europe. Lower income countries still tax less and higher income countries tax more also at the end of the period.

The best fit of the regression line is polynomial. Interestingly, if we exclude Luxembourg as an outlier among the countries, the best fit for the regression line will be linear.

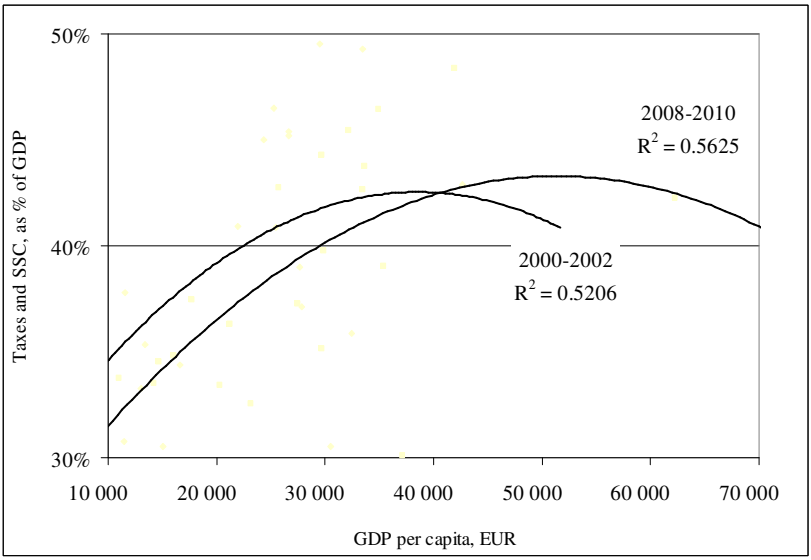


Figure 5. Total taxes (incl. SSC), % and level of GDP per capita, EUR (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations)

5. Taxes types and income level

How the society's income level is related with tax structure it uses? There seems to be clear situation that societies with different income levels also differ by their tax structure (Sandford).

In large, indirect taxes (sales taxes, excises, other) are preferred by the lower income countries. In those countries the direct taxes base (income and profit) is often limited. Therefore the focus of taxation has gone more on consumption. In addition, the lower income countries are often less administratively capable to collect income related taxes. In the EU context, the lower income countries are mainly Central and East European countries.

Accordingly, more affluent societies are using proportionally more direct taxes. Those societies' higher income levels and administrative capacity allows collect relatively more revenue on the basis of personal incomes and companies' profits.

Figures 6 and 7 demonstrate the tax structure and GDP level correlations over the decade.

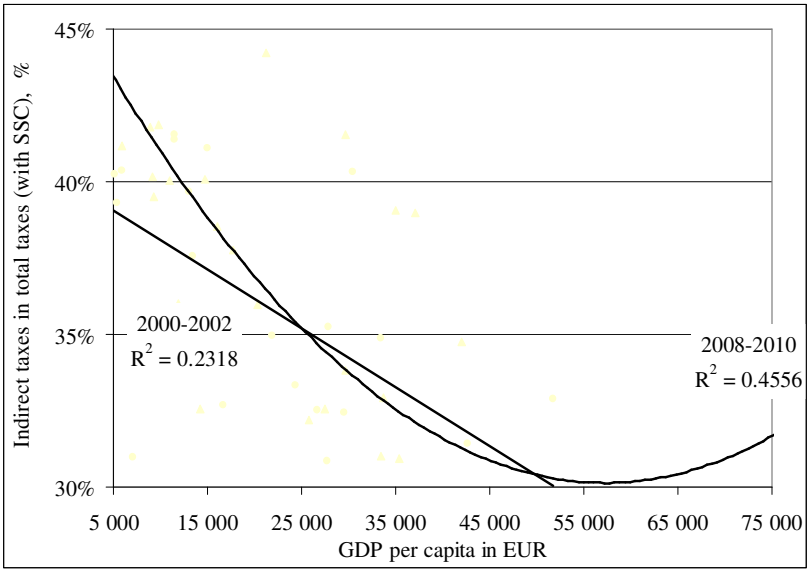


Figure 6. Indirect taxes in total taxes, % and GDP *per capita* level, EUR (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations).

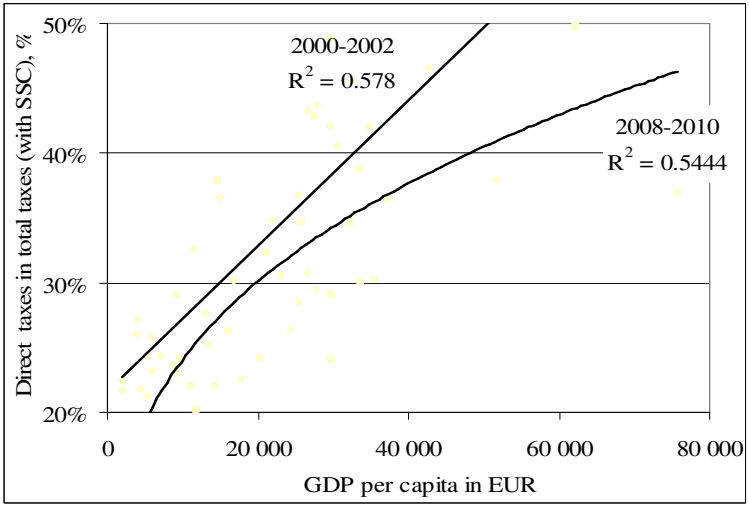


Figure 7. Direct taxes in total taxes, % and GDP *per capita* level, EUR (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations).

The graphs demonstrate general understanding, that lower income[2] EU countries use more indirect taxes and less direct taxation. However, the correlation between the income and indirect taxation is rather weak. At the beginning of the period, the correlation between GDP level and indirect taxation is much weaker, than correlation between income and use of direct taxes. The best fit for the regression line in the both cases is linear.

However, at the end of the period the situation is more "interesting" and relationships are not any more linear. The correlation between income and indirect taxes share in total taxation has strengthened. Intuitively, such an outcome might be explained by the EU enlargement factor during the period. The new EU members were mostly low income countries from Central and Eastern Europe. Those countries had commitment to harmonize their indirect taxes with EU regulations requirements. That inevitably led to increase of VAT and excise duties rates. Also were introduced several new, mainly indirect taxes (e.g. excise on containers or electricity). As an outcome, the taxation structure in CEE countries shifted towards indirect taxation; however, levels of income remained far behind richer West-European countries. Moreover, during the crisis year increase of indirect taxes took place mostly in lower income countries.

Relations between income level and direct taxation are strongly correlated and remained far stable during the period. The relationship is just opposite to the indirect taxation and wealthier countries use more direct taxes. However, at the end of the period the best fit for the regression line became polynomial. Nevertheless, the situation remains pretty clear – higher income countries tax structure is focused more on personal income and company's profits instead of consumption is lower income countries.

6. Tax structure and business cycle

How the use of different tax types are related with long-term growth and short term fluctuations across Europe? In following are followed the relationship between economic growth and tax structures during the last decade.

Figures 8 and 9 demonstrate indirect and direct taxation relationship with growth rates. The growth rate here is measured as change of GDP *per capita* during short and long term period. The long term period is defined as whole decade; short term periods consider GDP changes in 2009 as recession and 2010 as recovery. In the figures is given the tax base period from that the growth is measured.

[2] By the '*income level'* here we mean the GDP level *per capita.*

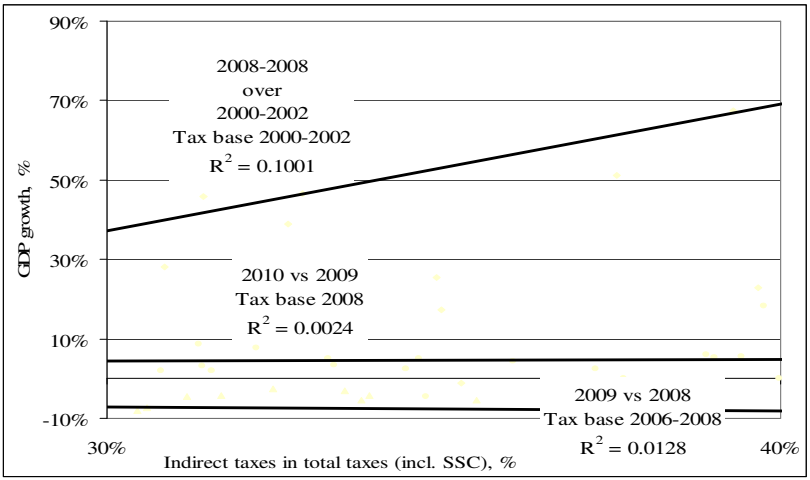


Figure 8. Indirect taxes in total taxes and growth rates, % (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations)

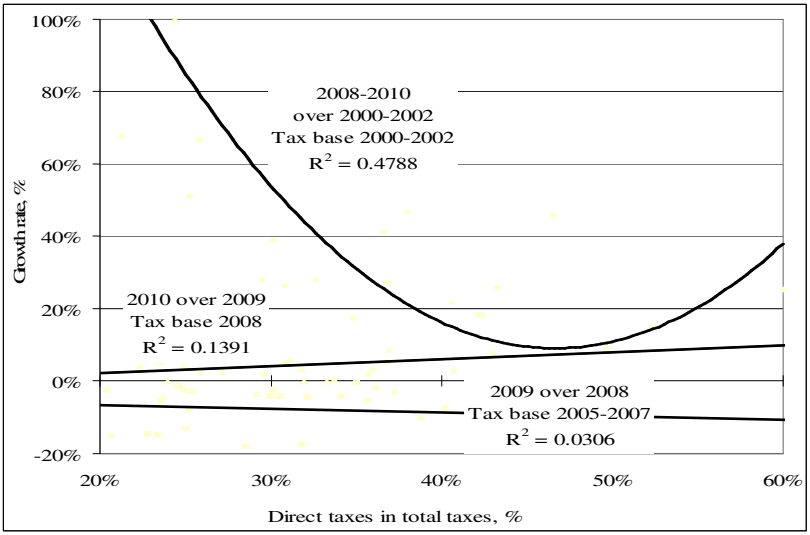


Figure 9. Direct taxes in total taxes and growth rates, % (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations).

The Figure 8 presents, those countries with higher share of indirect taxation have grown slightly faster during the period. There is a positive correlation between the share of indirect taxes and long term growth. However, as coefficient of determination R^2 indicates, that share of indirect taxes has rather limited impact on growth.

Does share of indirect taxes in total taxation is correlated with countries decline during the crisis year 2009 and with recovery the year later? The answer is negative - there is no visible relationship between indirect taxes and deepness of recession in 2009. There is no correlation between economic recovery in 2010 and indirect taxation either.

Relationship between share of direct taxes and growth presents rather different picture if compare with indirect taxation (Figure 9). There is a strong negative correlation between direct taxation and the long term growth. The countries with lower income and profit taxes in their tax revenues have grown clearly faster. However, the best fit for the trendline type in polynomial. Direct taxation share also explains about a half of GDP growth during the decade.

In the short run, direct taxation share is not related with deepness of economic recession. In-large, the higher income countries implemented more stabilization measures and therefore, avoided deep economic decline. However, economic recovery in 201 was slightly faster in the countries with lower direct taxation burden in their revenues.

To summarize, there is a certain correlation between taxation structure and long term economic growth. However, income and profit tax burden seems to limit economic growth much more than indirect (consumption) taxes. In the short term, the tax structure does not have significant impact on recession or slowdown.

Therefore, we have to agree with the EU institutions recent activities to facilitate shift from direct taxes (e.g. labor income) to indirect taxation (e.g. consumption). However, the positive impact is expected to be rather long term.

In following, similar relationships are presented for labor and consumption taxes (Figures 10 and 11).

As expected, consumption taxes are positively related with long term growth. The situation is rather similar with indirect taxation, as the taxation base is largely overlapping. However, the correlation is much stronger on consumption taxes than indirect taxes. But again, there is no correlation between short term GDP fluctuations and consumption taxes share in total taxes.

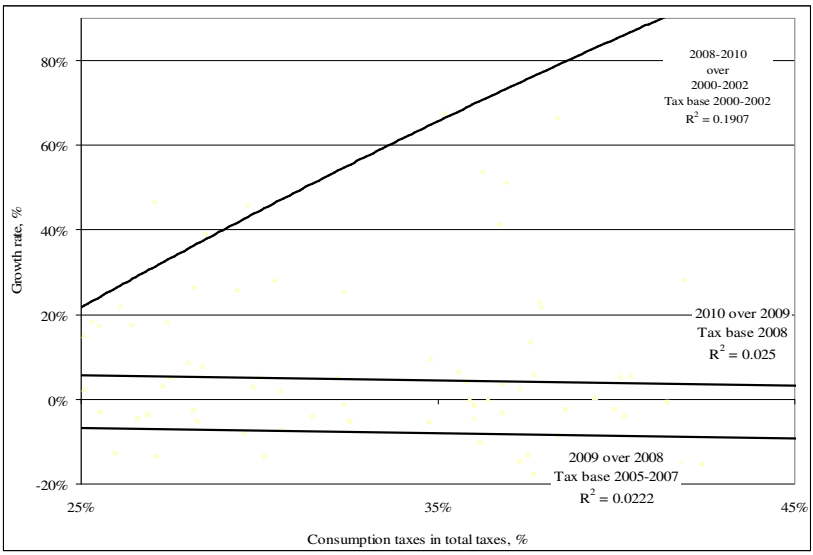


Figure 10. Consumption taxes in total taxes and GDP growth, % (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations).

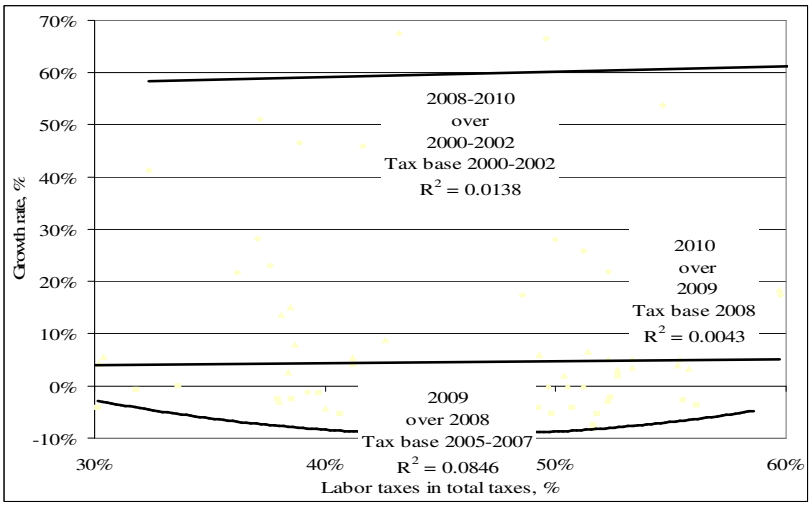


Figure 11. Labor taxes in total taxes and GDP growth, % (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators http://epp.eurostat.ec.europa.eu/ and author's calculations).

Labor taxation (Figure 11) and GDP developments are not correlated, even during the long term basis. That is somehow surprising and controversial outcome. In growth purposes, the EU recent tax policies are emphasizing a need to shift taxation out of labor (European Commission 2012). Actually, there is no visible correlation between labor taxation level and growth – neither in short term nor in long term.

The explanation is the structure of labor taxes in the member states. Those include both personal income taxes and social security contributions. In many countries, often those types of taxes offset each other. For example in Denmark - rather high personal income tax is combined with low social securities contributions.

Therefore, the taxation shift is rather country specific and should consider particular situation in the country.

7. Conclusions

European Union is a high tax level area in the global context. During the decade, the EU taxation burden has been about he same.

The countries with lower tax level have grown faster than those countries, which had higher taxation level at the beginning of the decade. However, taxation burden over the individual countries depends closely on the level of income – richer the countries are, higher taxation level they have.

During the period, the consumption taxation importance has slightly increased labor and capital taxes importance has declined. Lower income countries use more indirect taxes, higher income countries depend more on direct taxation. However, the relationship between types of taxes and income level became more complex during the decade.

Countries with higher indirect taxation share has been grown slightly faster during the decade; at the same time high direct taxation level is strongly negatively correlated long term growth. In the short run, taxation structure does not matter on the growth pattern.

High share of consumption taxes in total taxes is positively, but moderately related with long term economic growth, but again, there are no short term relationship between short term fluctuations.

Surprisingly, there is no relationship between labor taxation and growth - both long and short term.

Despite the EU tax policy purposes to shift taxation from labor to consumption, it is not a general rule. Tax structure modification is rather country specific issue and depends on particular economic and political circumstances.

References

1. **Atkinson A. & Stiglitz, J.** (1976) 'The Design of tax Structure: Direct versus indirect Taxation', *Journal of Public Economics 6, pp. 55-75,* North-Holland Publishing Company.
2. Eurostat http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/
3. European Commission (2006) T*he EU's Tax Policy Towards a barrier-free area for citizens and businesses* (EU, Directorate-General for Economic and Financial Affairs) http://ec.europa.eu/taxation_customs/resources/documents/common/publications/info_docs/taxation/tax_policy_en.pdf
4. European Commision (2011a) Growth Friendly Tax policies in the Member States and better Tax Coordination in the EU, Annex, COM(2011) 815 Final , Vol. 5/5 - ANNEX IV (Luxembourg, Publications Office of the European Union)
5. European Commission (2011b) T*axation Trends in the European Union* (Luxembourg: Publications Office of the European Union)
6. European Commission (2011c) 'Tax reforms in EU Member States 2011' European Economy 5/2011 (EU, Directorate-General for Economic and Financial Affairs)
7. European Commission (2012) *Taxation Trends in the European Union* (Luxembourg: Publications Office of the European Union) http://epp.eurostat.ec.europa.eu
8. **Johansson, Å. & Heady, C. & Arnold, J. & Brys, B. &ja Vartia, L.** (2008) Tax and Economic Growth, ECO/WKP(2008)28 Working paper NO.620 OECD Economic Department
9. **Martinez-Vazquez, J. & Vulovic, V. &Liu, Y.** (2010) Direct versus Indirect Taxation: trends, Theory and Economic Significance, Working Paper, 10-14, May Andrew Young School of Policy Studies, Atlanta, USA
10. **Myles, G.** (2009) 'Economic growth and Role of Taxation –Theory' ECO/WPK (2009)54 Working Paper NO.713 OECD Economic Department
11. OECD (2012) Revenue Statistics 2012, OECD Publishing www.oecd.org/tax
12. **Sandford, C.** (2000) *Why Tax Systems Differ* (Fiscal Publications, Milton Keynes, UK)

EUROPÄISCHE VERSCHULDUNG- UND WIRTSCHAFTS-KRISE 2008-2012: DIE ANALYSE DER KRISENMASSNAHMEN AUS DER SICHT VON DEN BETEILIGTEN[1]

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Abstract

The European financial crisis in recent years (2008–2012) and economic challenges in long-term perspective, have initiated intensive debates among politicians, academic circles and media. The intensity of the debate has been related to the amplitude of the crisis and to the possible interests, influence and costs of the social stakeholders. The aim of this research is to analyze the interests of crisis management and policy actions from the perspective of social stakeholders (political actors, economic actors, voters and supranational institutions such as European Central Bank). Process tracking and narrative analysis will be used as methodological approaches. The research will first focus on the challenges and dilemmas of the European financial crisis and interests of social stakeholders. The second part of the research will analyze how the social stakeholders managed to influence the policy decisions related to the Eurozone crisis management, which measures were taken and why supranational institutions have been most successful in decision making process.

Keywords: European Union, Eurozone, financial and economic crisis, social stakeholders and economic dilemmas

JEL Classification: E42, E58, G18, H12

Einleitung

Die europäische Verschuldungs- und Wirtschaftskrise hat den Diskussionen über die Gründe für die Krise, die Implikationen und die Krisenmaßnahmen sowohl in

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wissenschaftlichen Kreisen als auch unter den Politikern neue Nahrung gegeben. Obwohl meistens die praktischen Aspekte – wem, wann, wie viel und unter welchen Bedingungen – die Diskussion dominieren, muss man in der Zukunft sicherlich mehr Aufmerksamkeit den fundamentalen Fragen widmen, was die Euro-Krise angeht. Ist die Krise wegen der falschen Entscheidungen der politischen Elite entstanden, oder liegen die Gründe für das Entstehen der Krise darin, daß die theoretischen wirtschaftspolitischen Ideologien fundamentale widersprüchliche Konzeptionen und Fehler enthalten? Wie haben verschiedene Interessengruppen während der Krise auf die getroffenen Maßnahmen reagiert, und haben vielleicht einige Beteiligten die Prozesse mehr beeinflusst als andere? Welche Rolle haben die supranationalen Institutionen, etwa die Europäische Kommission und die Europäische Zentralbank, während der Krise gespielt?

Das Ziel der Studie ist es festzustellen, auf welchen Zeitpunkt und aus welchen Gründen hat sich die Rolle der sozialen Interessengruppen im Rahmen der Euro-Krise so verändert, daß die dominierende Rolle der nationalen Regierungen mit der Dominanz der übernationalen Institutionen der EU ersetzt geworden ist. Im Allgemeinen versuchen die Autoren das Verhalten der Beteiligten gleichzeitig aus politischem und wirtschaftlichem Prisma zu analysieren. Dabei muß man:

1) sowohl die Kategorien der Beteiligten, die die Euro-Krise beeinflusst haben und auch selbst davon betroffen sind, als auch deren Optionen und Dilemmas zu definieren;
2) die Maßnahmen zur Bewältigung der Krise aus der Sicht der Beteiligten zu analysieren;
3) die wirtschaftlichen Theorien und die politischen Konzeptionen zu kombinieren, um die Trends der Rollentransformation der an der Krise beteiligten Subjekte festzustellen und deren Interaktionen/Gründe zu analysieren;
4) aufbauend auf den Ergebnissen der Analyse die innere Logik der zukünftigen Entwicklungen zu prognosieren.

In Abschnitt 1 wird der theoretische Hintergrund der Krisenlösung beschrieben - das Dilemma zwischen der politischen und wirtschaftlichen Ratio im Kontext der Europäischen Integration. Abschnitt 2 konzentriert sich auf die Maßnahmen, die während verschiedener Krisenphasen getroffen wurden. Die fünf Kategorien der Beteiligten, die sowohl die Euro-Krise beeinflusst haben als auch selbst davon betroffen sind, werden im 3. Teil betrachtet. In Abschnitt 4 werden anschließend die Krisenmaßnahmen aus der Sicht der Beteiligten analysiert und im Kontext über das Dilemma zwischen politischer und wirtschaftlicher Ratio diskutiert

1. Das Dilemma zwischen politischer und wirtschaftlicher Vernunft im Kontext der Verschuldungskrise im Eurogebiet

Wegen der Turbulenzen im europäischen Währungsraum hat die politische und Wirtschaftselite der Europäischen Union schon seit vier Jahren Lösungen gesucht, um die Stabilität und die Nachhaltigkeit des Euro zu garantieren. Da aber Verschuldung und Wirtschaftskrise nicht nur den limitierten Kreis von Politikern

und Bankern betrifft, sondern auch verschiedene Interessengruppen (u.a. die Staatsbürger/Wähler und Finanzmarktteilnehmer) verunsichert, fällt es nicht leicht, zielführende Strategien und wirkungsvolle Maßnahmen zu finden. Dabei sollten die politischen Entscheidungen sowohl mit wirtschaftstheoretischen Konzeptionen und wirtschaftspolitischen Notwendigkeit für diese Maßnahmen als auch mit den praktischen Interessen der Beteiligten im Einklang stehen. Solche Situationen reflektieren das fundamentale Dilemma zwischen der politischen und wirtschaftlichen Vernunft.

Folgt man der einschlägigen Literatur, könnte man behaupten, dass der Konflikt zwischen der politischen und wirtschaftlichen Rationalität während solcher Rezessionen deutlich wird und während des Wirtschaftswachstums wieder abgemildert wird (Lane 2010). Przeworski hat beschrieben, dass eine verantwortungsvolle Regierung in Kombination mit dem Wirtschaftswachstum langfristig eine effiziente Demokratie garantiert (Przeworski 1991). Während einer Rezession fällt es aber schwer, gleichzeitig politische Popularität und nachhaltige Wirtschaft zu erreichen, weil die politische Popularität von kurzfristiger Krisenlösung und wirtschaftliche Nachhaltigkeit von langfristigen strategischen Entscheidungen abhängig sind. Es könnte zur paradoxen Situation führen, wo die getroffenen Politikmaßnahmen nur eine sekundäre Bedeutung haben, weil es unter den ökonomischen und politischen Umständen unmöglich ist, beide Ziele gleichzeitig zu erreichen – unabhängig davon wie klug oder dilettantisch die Politiker wären oder wie gut sie beraten würden (Schmidt 2010; Mugge 2011).

Dabei muss man aber in Betracht ziehen, dass politische Popularität auch ohne wirtschaftliche Nachhaltigkeit erreicht werden könnte. Sollte das Handeln der Staaten wirtschaftlich nicht nachhaltig sein, dabei aber gleichwohl den erwünschten hohen Lebensstandard bewirken oder aber zumindest versuchen, diesen zu halten, könnte dies zur langfristigen Popularität der politischen Elite beitragen, weil den sozialen Gruppen solche Wohlfahrtsbedingungen zur Verfügung gestellt werden, die sie unter normalen Marktbedingungen nicht genießen würden. Es bestünde sogar die Möglichkeit, dass dabei keine kurzfristigen negativen Auswirkungen erscheinen (Kalb 2012).

In diesem Kontext stellt Schmidt (2010) in Frage, ob die EU überhaupt die wirtschaftspolitische Kapazität hat, die Probleme, die die internationalen Finanzmärkte aufwerfen, zu bekämpfen und ob die wirtschaftspolitischen Maßnahmen gleichzeitig politisch nachhaltig und wirtschaftlich ausreichend effizient sind, um die Finanzmärkte zu beruhigen und dabei hohes Wirtschaftswachstum zu garantieren. Van Schendelen (2002) behauptet, dass es wegen dem supranationalen Charakter der EU sowieso schwer fällt, Entscheidungen zu treffen, weil daran mehrere Institutionen beteiligt sind. Dabei machen die unterschiedlichen Interessen der Mitgliedsstaaten es nicht leicht, die aus wirtschaftlicher und politischer Sicht notwendigen rationalen Lösungen zu finden (während der Euro-Krise könnte man mehrmals beobachten wie die EU über Krisenpläne zerstritten war; siehe, z.B. Die Chronologie… 2013; EU über Krisenplan… 2012; Böcking 2012).

Mugge (2011) diskutiert weiterhin den theoretischen Konflikt zwischen den politischen und wirtschaftlichen Maßnahmen und deren Erfolgskriterien. Er unterscheidet zwischen der pragmatischen und dogmatischen Politik, wobei allmählich die rationale Politik mit dogmatischer Politik versetzt wird. Als Beispiel könnte man das Lobbying der Finanzbranche in den 1990er Jahren anführen, wobei die einflussreichsten europäischen Banken grenzüberschreitende Kapitalmärkte aus Sicht der zukünftigen Rentabilität als entscheidend identifiziert haben und danach starke Lobby für die entsprechenden Entwicklungen in der Gesetzgebung betrieben haben.

Die Kontroverse zwischen den politischen und wirtschaftlichen Zielen könnte auch im Falle der aus politischer Sicht wichtigen (oder sogar symbolischen), dabei aber aus wirtschaftlicher Sicht komplizierten Prozessen entstehen. Eine Währungsunion und die europäische gemeinsame Währung stellen einen wichtigen und aus politischer Perspektive erfolgreichen Schritt in der europäischen Integration dar, die um jeden Preis Unterstützung finden sollte. Würde diese Initiative rein ökonomisch betrachtet, bestünde die Möglichkeit, dass nicht alle Mitglieder von der Währungsunion profitierten. Im Kontext der aktuellen Euro-Krise haben mehrere Analysen sowohl die Pro- und Contra-Argumente zur der einheitlichen Währung angedeutet (z.B. Bernanke 2005; Alexiou und Nellis 2012; Alesina, Ardagna und Galasso 2010) als auch über das potentielle Aufbrechen des Eurogebiets diskutiert (siehe, Eichengreen 2007, 2009). Die Argumente für die einheitliche Währung basieren zum Teil auf der Interpretation, dass dank der Wechselkursdynamik sowohl die Staaten, die über eine positive Handelsbilanz verfügen und relativ hohe Produktivität vorweisen, als auch die Mitglieder des Eurogebiets mit negative Handelsbilanz und relativ niedriger Produktivität davon profitieren können. Unter den Marktbedingungen sollte der Wechselkurs der Staaten mit positiver Handelsbilanz aufwerten, was zu der Verringerung der Effizienz der Produktion in diesen Staaten führt. Weil in der Währungsunion die Effizienz der Produktion in diesen Staaten mit der Uneffizienz der Staaten, die negative Handelsbilanz und relativ niedrige Produktivität haben, balanciert wird, können die sogenannten produzierenden Staaten seine Produktion erhöhen (Lane 2010, Notermans 2012). Die Entwicklung der industriellen Produktion während der Periode 1990-2011 in manchen EU-Mitgliedsstaaten bezeichnet die Abbildung 1.

Aus der Sicht der sogenannten konsumierenden Mitgliedsstaaten wird der finanzielle Überschuss der Mitgliedsstaaten mit positiver Handelsbilanz mit der Kapitalnachfrage der konsumierenden Länder ausgeglichen (Kregel 2011). Praktisch gesehen bedeutet dies, dass konsumierende Länder wie z.B. Griechenland so lange konsumieren können, wie die produzierenden Mitgliedsstaaten (z.B. Deutschland) ihnen dafür das Kapital zur Verfügung stellen. Weil dadurch das Lohnniveau der sogenannten konsumierenden Mitgliedsstaaten nicht verändert wird, sind auch die übrigen konsumierenden Mitgliedsstaaten mit solcher Situation zufrieden, obwohl die Differenzen in der Industrieproduktion zwischen den Mitgliedsstaaten in langfristiger Perspektive sich ausbreiten und die Verschuldungskrise verstärken können (Kregel 2011).

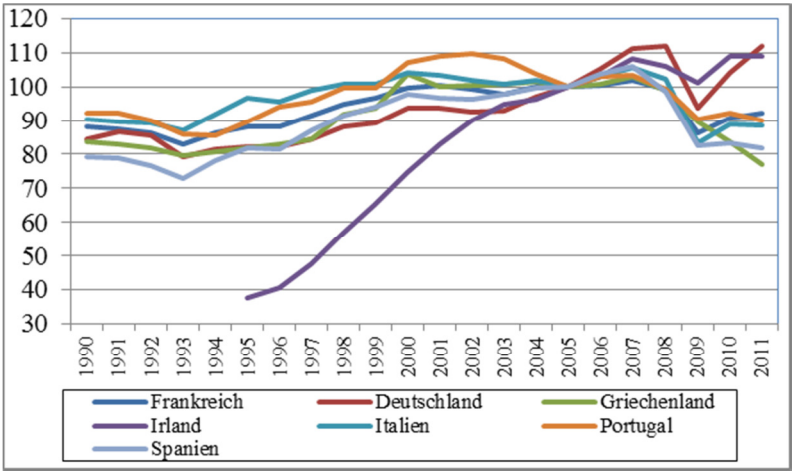

Abbildung 1. Die industrielle Produktion (Index, 2005=100) in 1990-2011, (Selektion der EU-Staaten). Quelle: UNECE Statistical Database, 2013.

In diesem Zusammenhang entsteht auch das Dilemma, ob man im Eurogebiet allen Mitgliedsstaaten unabhängig von deren Fiskalleistung dasselbe niedrige Zinsniveau anbieten sollte oder aus Sicht der Fiskaldisziplin bei allen Staaten differenzieren müsste. Die gegenwärtige Eurokrise hat in diesem Kontext einen rein praktischen Aspekt hervorgebracht: Wer und in welchem Maße sollte die Kosten für die Synchronisierung der Zinssätzen übernehmen? Praktisch gesehen könnte man fragen, warum sollten und müssten die Steuerzahler z.B. in Deutschland die zusätzlichen Kosten für die Synchronisierung der Zinssätze tragen, obwohl der Zinssatz in 2012 sowieso schon fast auf 0% gesunken ist? (siehe, EZB Leitzins…, 2013).

In der einschlägigen Literatur wird davor gewarnt, dass die getroffenen kurzfristigen Maßnahmen, um politische Ziele zu erreichen, unmittelbare negative wirtschaftliche Auswirkungen mit sich bringen. Obwohl die negativen wirtschaftlichen Kosten umgehend kompensiert werden, muß man langfristig doch mit negativen politischen Auswirkungen rechnen (Eichengreen 2009). Aus wirtschaftstheoretischer Sicht bringt eine Währungskrise sowohl die Abwertung des Wechselkurses als auch die Steigerung des Preisniveaus und der Arbeitslosigkeit mit sich. Unter den Marktbedingungen benötigt man in einer solchen Situation aber keine Veränderungen von Politik, weil Wechselkurs und Produktivität sich anpassen würden. Obwohl sich die Verbraucher wegen der hohen Inflation für ihr Geld weniger leisten können und ihre Kaufkraft schwindet, gibt es wenigstens keinen Rückgang von Beschäftigung (Kregel 1999). In der Währungsunion wird die Anpassung aber nicht durch den Wechselkurs, sondern durch die Rezession im Arbeitsmarkt verursacht. Die Kaufkraft der Verbraucher wird ausreichen, um die Kosten der hohen Arbeitslosigkeit und der steigenden Staatsausgaben zu

kompensieren. Aus praktischer Sicht mögen die Arbeitslosigkeit Daten im Eurogebiet im Vergleich zu den Krisenmanagement-Maßnahmen hier als gutes Beispiel dienen (siehe Abbildung 2, z.B. Spanien, Griechenland, Portugal). Obwohl diese Krisenmaßnahmen kurzfristig die soziale Stabilität befördern, hemmen die aber langfristig die Anpassung des Arbeitsmarktes und die Senkung der Lohnkosten und generieren deswegen langfristig die Erhöhung der Arbeitslosigkeit und haben einen negativen Einfluss auf die Steuereinnahmen (Kregel 1999).

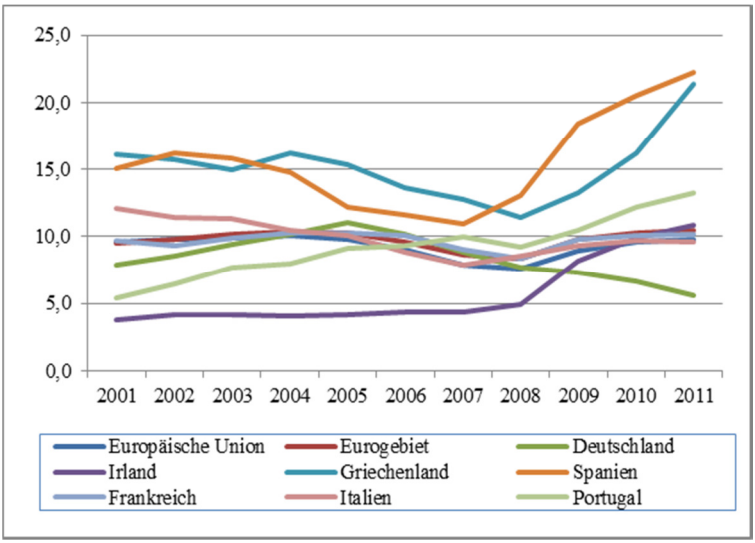

Abbildung 2. Die Arbeitslosigkeit (%) in 2001-2011, (Selektion der EU-Staaten). Quelle: Eurostat 2012

2. Die getroffenen Krisenmaßnahmen im Überblick

Die Analyse der Maßnahmen gegen die Verschuldungs- und Wirtschaftskrise im Eurogebiet reflektiert deutlich, dass es in mehreren Fällen an einer klaren ordnungspolitischen Strategie zur Rettung des Euro und zur Reform der Staatsfinanzen und der Finanzmärkte gemangelt hat (Wentzel und Beck 2012). Obwohl seit Beginn 2013 die politische Elite der Eurozone der Meinung ist, dass der Höhepunkt der Krise vorüber ist, könnte man mit Blick auf die wirtschaftlichen Indikatoren kaum dasselbe behaupten. Der Internationale Währungsfond hat im Januar 2013 seinen Konjukturausblick für das Eurogebiet korrigiert und erwartet wegen der anhaltenden Unsicherheit der Märkte in 2013 eine entsprechend anhaltende Rezession (IMF prophezeit… 2013). Langfristig steht das Eurogebiet dabei wegen der zunehmenden Überalterung der Bevölkerung und der weiterhin hohen Belastung der Staatshaushalte vor ernsten Herausforderungen (Papadimitrou and Wray 2011). Deswegen ist es nötig die getroffenen Krisenmaßnahmen zu

analysieren und der Politik Vorschläge zu unterbreiten, die bei der Krisenlösung politisch und wirtschaftlich rationale Argumente angemessen berücksichtigen.

Die von 2008 bis 2012 in Europa getroffenen Maßnahmen beinhalten neben den Offenmarktgeschäften die folgenden unkonventionellen geldpolitischen Aktivitäten (Die Chronologie… 2013; Gregosz et al. 2012; Wenzel und Beck 2012):

- *Die Entfaltung des so genannten „temporären Rettungsschirmes" für überschuldete Euro-Staaten im Umfang von maximal 750 Milliarden Euro, die im Mai 2010 auf drei Jahren angelegt wurden und folgende Elemente umfassten: a) die Schaffung* der multilateralen Europäischen Finanzstabilisierungsfazilität (EFSF) und des Europäischen Finanzstabilisierungsmechanismus (EFSM) und b) die Kredite des Internationalen Währungsfonds. Zum „Rettungsschirm" gehören auch die staatlichen Sparprogramme im Rahmen der Austeritätspolitik, *wobei die verschuldeten Staaten sich zu erheblichen Reformen und Einschnitten verpflichtet haben (z.B. Schuldenabbau, Steuer- und Arbeitsmarktreform, Privatisierung von Staatsbesitz, usw.). Unter anderem sollten die Modernisierung der Verwaltung und höhere Einsparungen im öffentlichen Sektor in Angriff genommen werden*.
- Die Vereinbarung der fünf Zentralbanken (u.A. die Europäische Zentralbank, das Federal Reserve System der Vereinigten Staaten und Bank of England), um die Swap-Geschäfte *wieder einzuführen*, die zum *Ankauf von Staatsanleihen* notleidender Euro-Staaten durch die Europäische Zentralbank (EZB) geführt haben.
- *Die langfristigen Refinanzierungsgeschäfte* (LTRO) mit einer Laufezeit von 36 Monaten, die von der Europäischen Zentralbank angeboten werden, und die Lockerung der Sicherheitsanforderungen. Die Regellaufzeit für LTROs beträgt normalerweise drei Monate. Die beiden Maßnahmen dienen dazu, den Banken Liquidität zur Verfügung zu stellen und dadurch das Funktionieren des Euro-Geldmarktes zu unterstützen.
- *Das neue geldpolitische Anleihen-Ankaufprogramm OMT* (*outright monetary transactions*) der EZB, wobei die Europäische Zentralbank kurzfristige Staatsanleihen mit Laufzeiten von 1 bis 3 Jahren am Sekundärmarkt ankauft. Es handelt sich um den Versuch, den geldpolitischen Transmissionsmechanismus von Banken in die Realwirtschaft durch die Bewirtschaftung des Sekundärmarktes für Staatsanleihen im gesamten Euro-Raum sicherzustellen und damit die Einheitlichkeit der Geldpolitik zu wahren (siehe Hummer 2012).

Im Rahmen der sogenannten „Rettungsschirme" für hoch verschuldete Staaten (Irland, Griechenland, Portugal, in 2012 Rettungspaket für Zypern) haben diese Staaten um finanzielle Hilfe gebeten, weil sie sich wegen der hohen Zinssätze am Finanzmarkt nicht mehr refinanzieren könnten. Die finanziellen Mittel der Eurozone-Partner und des Internationalen Währungsfonds würden aber nur dann diesen Staaten zur Verfügung gestellt, wenn sie sich verpflichteten, die von EU und IWF geforderten erheblichen Spar- und Reformprogramme durchzuführen. Die Fortschritte bei Reformen wurden durch EZB und dem IWF attestiert. Um die institutionelle Lücke in der Krisenbewältigung zu füllen, wurden die EFSF und das

EFSM geschaffen, die ab Oktober 2012 durch den permanenten Fonds ESM ersetzt wurden. Der ESM hat ein Stammkapital von 700 Mrd. Euro, der von den Euro-Staaten bereitgestellt wird (siehe Vertrag zur… 2012). So verfügt der ESM unterschiedlich zum EFSF selbst über Kapital – benutzt das Stammkapital als die Absicherung der Finanzoperationen, die auf den Kapitalmärkten vorgenommen werden, um die Kredithilfen von bis zu 500 Mrd. Euro zu finanzieren (Die Chronologie… 2013). Mit diesen Maßnahmen hat man den Märkten ein Signal über die zentral durchgeführten Rettungsmaßnahmen gesendet und dass diese in Zukunft möglicherweise weiter fortgesetzt werden, sollte es notwendig sein.

Zusätzlich hat die Europäische Zentralbank beschlossen, italienische und spanische Staatsanleihen zu kaufen. Obwohl diese Staaten um die finanzielle Hilfe nicht gebeten haben, hat die EZB diese Maßnahme vorgenommen, um gegen das Misstrauen der Finanzmärkte anzugehen. Weil aber das Haushaltsdefizit in beiden Länder stark angestiegen ist, die Zinsen auf italienische und spanische Staatsanleihen historische Hochstände erreicht haben und die Reformen nicht ausreichend waren, fürchteten die Finanzmärkte ähnliche Entwicklungen wie im Fall Griechenland und Portugal. Weil der Ankauf von Staatsanleihen zu diesem Zeitpunkt unbegrenzt und „unsterilisiert“ war, ist das Geldangebot deswegen auch gestiegen.

Trotz aller eingeleiteten Maßnahmen waren die Reaktionen der Finanzmärkte unsicher – die Entspannung an den Märkten fand nur zwischenzeitlich und auch nur zögerlich statt, und die Zinssätze sind wieder gestiegen. Der Geldmarkt kühlte sich ab, und die Banken haben die Kreditvergabe erheblich reduziert. Deswegen hat die EZB langfristige Refinanzierungsgeschäfte eingeführt, wobei die von der EZB anerkannten Banken in der Eurozone von der EZB gegen Sicherheiten einen LTRO-Kredit aufnehmen könnten. Das Ziel der Maßnahme war, den Banken zu höherer Liquidität zu verhelfen und dadurch das Funktionieren des Euro-Geldmarktes zu unterstützen. Diese Aktionen hat man koordiniert mit anderen dominierenden Zentralbanken der Welt durchgeführt. Weil im Rahmen der LTRO den Banken zugleich auch günstige Kredite zur Verfügung gestellt wurden, haben die Aussichten der Wirtschaft sich verbessert.

In September 2012 hat die EZB ein neues Programm zum Anleihen-Ankauf OMT initiiert, wobei die EZB im Eurogebiet auf den Sekundärmärkten die Staatsanleihen mit Laufzeiten von 1 bis 3 Jahren angekauft. Das neue Programm ersetzt die früheren, schon beendeten Programme zum Ankauf der Staatsanleihen, nur mit dem Unterschied dass im Fall OMT das betroffene Land einen Antrag auf Hilfeleistung stellt und sich bereits unter einem der beiden „Rettungsschirme“ (EFSF/ESM) befindet. Obwohl das neue Bond-Kaufprogramm der EZB in den Mitgliedsstaaten ziemlich heftige Diskussionen ausgelöst hat[3], hat die Schaffung der OMT dazu

[3] z.B. in Deutschland hat die Bundesbank behauptet, daß der Bondkaufplan gefährde die Unabhängigkeit der europäischen Währungshüter und sei zu nah an dem Verbot der Staatsfinanzierung durch die Notenpresse (siehe, Thesing 2012. http://www.welt.de/newsticker/bloomberg/article109764322/EZB-bezeichnet-OMT-als-

beigetragen, die Finanzmärkte zu beruhigen und das sogenannte Tail-Risiko, das man in diesem Kontext als ein möglicherweise nicht erkanntes Risiko interpretieren könnte, zu minimieren. Trotzdem lasten die Folgen der Verschuldungskrise weiterhin auf den einzelnen Mitgliedsstaaten, und der kurzfristige Ausblick für das Eurogebiet bleibt weiterhin unsicher.

3. Die Beteiligten an die Euro-Krise und deren Interessen

*Um die während der Euro-Krise getroffenen Ma*ßnahmen zu analysieren, muss man die Interessen der Beteiligten der Euro-Krise feststellen und danach die Initiativen und die Programme in einem komplexen System bewerten. Die Autoren unterscheiden nachfolgend zwischen fünf Kategorien der Beteiligten, die sowohl die Euro-Krise beeinflussen als auch selbst von der Krise beeinflusst sind (siehe, Held 2006; Van Schendelen 2002; Mugge 2011):

- die wirtschaftlichen Interessengruppen,
- die politische Elite,
- die Finanzmarktteilnehmer (umfassen sowohl die spekulativ handelnden als auch nicht spekulative Teilnehmer),
- die Staatsbürger und Wähler, die sich für die Euro-Krise interessieren,
- die supranationalen Institutionen der Europäischen Union (bzw. die Europäische Zentralbank und die Europäische Kommission) und die internationalen Finanzinstitutionen (bzw. der Internationale Währungsfonds).

Die wirtschaftlichen Interessengruppen umfassen die Unternehmen, die direkt oder indirekt von der Steuerpolitik, Arbeitsmarktpolitik, Nachfrage und den Regelungen im Eurogebiet beeinflusst sind. Obwohl große Unterschiede zwischen den Steuersätzen und der inländischen Nachfrage in einzelnen Euroländern bestehen und die Interessen der lokalen Wirtschaftselite sich insbesondere deswegen unterscheiden, müssen die Unternehmen in der Eurozone seit Beginn der Finanz- und Schuldenkrise mit den Folgen des pessimistischen Wirtschaftsausblicks und den steigenden Steuersätzen klar kommen (Mugge 2011). Die Unternehmen sind besonders an der schnellen Krisenlösung, an zusätzlichen finanziellen Mitteln, starkem Verbrauchs- und Beschäftigungswachstum und an einem stabilen Finanzsektor interessiert. Die notwendigen strukturellen Reformen, um einen schrumpfenden Staatshaushalt zu bekämpfen, könnte man in diesem Kontext als sekundär bezeichnen. Die von einer steigenden Inflationsrate und höheren Steuersätzen verursachten Kosten für alle sozialen Gruppen sind eher akzeptabel als die hohen Kosten für einzelne Institutionen, die auf den Finanzmärkten Risiken auf sich genommen haben (z.B. Banken, Renten- oder Pensionsfunds). Die Erhöhung der Staatsverschuldung stellt dabei kein Problem dar, solange die Staaten fähig sind, die Schulden zu bedienen. Weil die Unternehmen als die größten Finanzierer der politischen Parteien auch enge Beziehungen zu der politischen Elite haben, werden diese Interessen auch der politischen Elite deutlich gemacht (Lipset 1959). In

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notwendiges-Instrument-in-Ausnahmelage.html).

langfristiger Perspektive sind die Unternehmen an einer stabilen makroökonomischen Wirtschaftsumgebung interessiert: stetige Inflation, stabile Wirtschaftsentwicklung, relativ niedrige Zinsen und Steuersätze, effiziente Regulierungen, ein günstiges Geschäftsklima, Zugang zu günstigen Finanzmitteln, günstige Wechselkurse für exportierende Unternehmen (Kregel 1999).

Unter den Beteiligten hat *die politische Elite* in den meisten Fällen die beste Möglichkeit, an den Entscheidungsprozessen beteiligt zu sein oder diese zu beeinflussen (Held 2006). Im Kontext der Eurokrise bedeutet dies, dass sowohl die Vorsitzenden der Vertretungen der einzelnen Mitgliedsländer (im Rat der Europäischen Union) als auch die Finanzminister und die Präsidenten der Nationalbanken auf der Basis ihrer Mandate, die sie von den Nationalparlamenten erhalten haben, die wichtigsten Entscheidungen treffen. Die Politiker, die an Krisenlösungen beteiligt sind (bzw. die Regierungschefs und/oder deren Finanzminister), sind nicht direkt von den Bürgerinnen und Bürgern gewählt. Es bestimmen die nationalen Koalitionen die Minister. Die einflussreichsten Politiker, die sowohl direkt gewählt sind als auch in der Regel an Krisenlösungen beteiligt sind, sind zugleich Mitglieder der Nationalparlamente, die in den Komitees für europäische Angelegenheiten sitzen. Dieses Prinzip – dass die Mitglieder der Komitees für europäische Angelegenheiten die Entscheidungsmandate haben – hat man seit Beginn der Krise 2008 immer mehr und mehr benutzt, wobei früher die unkonventionellen Entscheidungen in den Parlamenten auf Basis der Diskussionen und Abstimmung im Plenum getroffen wurden (de Grauwe 2010).

Obwohl die Daten zeigen, dass in den Finanzmärkten sowohl die *nicht- spekulativen Finanzmarktteilnehmer* als auch s*pekulativ handelnde Teilnehmer* eine spezielle Rolle spielen, um Liquidität anzubieten, vertreten die beiden Finanzmarktteilnehmer kontroverse Interessen (siehe Papadimitrou and Wray 2011). Spekulativ handelnde Finanzmarktteilnehmer interessieren sich kurzfristig für schwankende Preise, die durch die Unsicherheit der Märkte verursacht sind, nicht-spekulative Teilnehmer aber eher für nachhaltige Vermögenssicherung mit langfristiger Perspektive. Aus praktischer Sicht sollte man betonen, dass während der Eurokrise die Finanzmärkte mehrmals der politischen Elite Grund gegeben haben, die Initiative zu ergreifen und die erforderlichen Entscheidungen zu treffen.

Die Kategorie *Staatsbürger und Wähler* umfasst die Bürger der Mitgliedsstaaten der EU, die an Wahlen auf lokaler Ebene oder des Europäischen Parlaments teilgenommen haben. Weil die Bürger das politische System durch demokratischen Wahlen kontrollieren, sollte die politische Elite auf die Interessen der Bürger Acht geben, sonst werden sie durch neue politische Eliten ersetzt, die vielleicht eher bereit sind, populistische Forderungen nachzugeben – sogar dann, wenn es allein schon theoretisch unmöglich ist, diese Forderungen auch zu erfüllen (Lipset 1959).

Mit Blick auf die einschlägige Literatur kann behauptet werden, dass die Wähler an einer langfristigen, nachhaltigen Entwicklung der Gesellschaft und einer stabilen Wirtschaftsanlage (das Verbrauchervertrauen), an einer hohen Beschäftigungsrate

und einem hohen Lohnniveau, niedrigen Steuersätzen und hohen Staatsausgaben interessiert sind (Kalb 2012; Dahl 1991). Die Innovationen, die Umstrukturierung der Wirtschaft und die Erhöhung der Produktivität und der Exportfähigkeit der Unternehmen haben für den Einzelnen nur relativ geringe Bedeutung (Inglehart 1997). In den meisten Fällen treffen die Bürger die Entscheidungen nicht auf der Basis gründlicher Kenntnisse in Wirtschaft und Wirtschaftspolitik (Birch 1993). Gerade weil die Wähler im Allgemeinen keine speziellen politischen und Wirtschaftskenntnisse benötigen, um ihre Entscheidungen zu treffen, sollte die politische Elite auf alle sozialen Gruppen Acht geben.

Zu den übernationalen *Finanzinstitutionen der EU*, die an die Kriesenlösung beteiligt sind oder dafür geschaffen wurden, gehören die Europäische Zentralbank und der Europäischen Stabilitätsmechanismus (sowie seine Vorgänger EFSF/EFSM). Um ihre Funktionen erfüllen zu können, unterhalten diese Institutionen enge Beziehungen zu den nationalen Zentralbanken. Die Beschlussorgane dieser Institutionen (inklusive die nationalen Zentralbanken) werden von den Mitgliedern derselben Organisationen oder durch die Nationalparlamente, Präsidenten oder Regierungen bestimmt. Während die Politiker sich bemühen, an die Macht zu kommen und danach die Macht auch zu behalten, sind die Mandate der Finanzelite in der Regel definiert ohne direkte Beziehung zu den Wählern. Deswegen kümmert die administrative Finanzelite (die nationalen Zentralbanken und die Europäische Zentralbank) sich nicht darum, kurzfristig Popularität zu gewinnen (Zielonka 2006). Die *internationalen Institutionen* (bzw. der Internationale Währungsfonds) haben direkt an der Krisenlösung teilgenommen. Obwohl sie dabei kurzfristig vor allem die Stabilität der Finanzmärkte im Blick haben, kümmern sie sich dabei auch um den Profit aus den Darlehen. Weil die Finanzinstitutionen und Finanzmärkte heute wegen dem grenzüberschreitenden Charakter der Finanzsysteme miteinander in enger Vierbindungen stehen, ist es langfristig gesehen selbstverständlich, dass die internationalen Finanzinstitutionen sich sowohl auf die Nachhaltigkeit des Finanzsystems als auch auf ein stabiles Wirtschaftswachstum fokussieren. Dabei ist es auch in deren Interesse, dass der Wechselkurs des Euro steigt, weil deswegen die Nachfrage nach Gütern, die nicht im Eurogebiet produziert werden, steigen wird (die im Eurogebiet produzierten Güter werden teurer).

4. Die Analyse: Die Wahl zwischen den politischen und wirtschaftlichen Zielen: die Krisenmaßnahmen aus der Sicht der Beteiligten

Bei den unkonventionellen geldpolitischen Maßnahmen im Eurogebiet *sowohl zwischen kurzfristigen und langfristigen als auch positiven und negativen Auswirkungen unterschieden werden (siehe Tabelle 1).* Dieser Abschnitt kombiniert die Trends der Rollentransformation der an der Euro-Krise beteiligten Subjekte und deren Interaktionen/Gründe. Aufbauend auf den vorigen Abschnitten kann man die Krisenmaßnahmen und die Interessen der Beteiligten als die Matrix bezeichnen.

Tabelle 1. Die Ziele der getroffenen unkonventionellen geldpolitischen Maßnahmen

	Kurzfristige Effekte		**Langfristige Effekte**	
	Positive	**Negative**	**Positive**	**Negative**
Die Rettungspakete (EU-Staaten)	Die Staaten bekommen Zugang zu den Finanzmitteln	Wirtschaftliche Notlage, schwächere Nachfrage	Die Staaten sind zu erheblichen Reformen verpflichtet	Die sozialen Spannungen
Der Ankauf von Staatsanleihen	Reduzierung des Ansteckungsrisikos, mehr Zeit für Reformen	*Weniger Anreiz,* , die *Reform* zum Erfolg zu führen	-	Das zusätzliche Geldangebot verursacht Inflation
Die langfristigen Refinanzierungsgeschäfte (LTRO)	Den Finanzmärkten wird Liquidität angeboten	Keine Änderung im Risikoverhalten der Banken	Temporäre Reduzierung von Stress, Vertrauen in das Eurosystem	Verwendungen an den Finanzmärkten
Das Anleihen-Ankauf-Programm OMT	Die Minimierung des sogenannten Tail-Risiko, mehr Anreiz Reformen durchzuführen	Moralisches Risiko	Effektive Backstop-Fazilitäten während der europäischen Schuldenkrise	Moralisches Risiko

Quelle: Zusammengestellt bei den Autoren.

*Kurzfristig sollten alle getroffenen Ma*ßnahmen dem Ziel dienen, den überschuldeten Euro-Staaten den Zugang zu finanziellen Mitteln ermöglichen , den Finanzmärkten Liquidität und Vertrauen anzubieten und in den Mitgliedsstaaten mehr Zeit für Reformen zu gewinnen. Dabei sollten aber auch die negativen Aspekte beachtet werden: kurzfristige ökonomische Auswirkungen, keine Änderungen im Risikoverhalten der Banken und moralisches Risiko (m*oral hazard*) (Kregel 2011).

Langfristig sollten die Maßnahmen sowohl die überschuldeten Staaten zu erheblichen Reformen verpflichten als auch das Vertrauen der Finanzmärkte und der Öffentlichkeit in das Eurosystem und die EZB erhöhen. Unabhängig von allen getroffenen und zu treffenden Maßnahmen dürfen dabei zunehmende soziale Spannungen, steigende Inflationsrate und das moralische Risiko bei allen Finanztransaktionen aber nicht übersehen werden (Wenzel und Beck 2012).

Ob die gewünschten Ziele auch erreicht werden, hängt davon ab, wie sehr die verschiedenen Interessengruppen von den getroffenen Maßnahmen betroffen sind oder beeinflusst werden und als politisch und wirtschaftlich vernünftig, sinnvoll und zielführend gesehen und schließlich akzeptiert werden (siehe Tabelle 2).

Tabelle 2. Die Auswirkung der getroffenen unkonventionellen geldpolitischen Maßnahmen aus der Sicht der Beteiligten

	Die Rettungs-pakete (EU-Staaten)	Der Ankauf von Staatsanleihen	Die langfristigen Refinanzierungs-geschäfte (LTRO)	**Das Anleihen-Ankauf-Programm OMT**
Die Wirt-schaftselite (Unternehmen)	Schafft Unsicherheit	*Gibt weniger Anreiz* dazu, die *Reformen durchzuführen*	Bietet Liquidität an	Generiert moralisches Risiko
Die Staatsbürger/ Wähler	Schafft Unsicherheit	*Generiert hohe Ausgaben im Sozialbereich und erhöht die Beschäftigung; aber generiert auch Inflation*	*Generiert hohe Ausgaben im Sozialbereich und erhöht die Beschäftigung*	Generiert moralisches Risiko
Die politische Elite	Verursacht den Verlust der Popularität	Gibt weniger Anreiz dazu, die Sparprogramme schnell durchzu-führen	Gibt weniger Anreiz dazu, die Sparprogramme schnell durchzu-führen	Könnte den Verlust von Popularität verursachen
Die Finanzmarkt-teilnehmer	Verursacht wirt-schaftliche Spannungen, aber Reformen werden durchgeführt	Generiert temporäre Rücklaufsperre	Bietet Liquidität an	Generiert effektive Rücklaufsperre
Die Finanz-institutionen	Reformen werden durchgeführt	Generiert temporäre Rücklaufsperre und beruhigt die Märkte	Bietet Liquidität an	Generiert effektive Rücklaufsperre

Quelle: Zusammengestellt bei den Autoren.

Sowohl die Unternehmen als auch die Staatsbürger/Wähler sind am meisten von den staatlichen Sparprogrammen im Rahmen der Austeritätspolitik (bzw. des Euro-Rettungsschirmes) betroffen. Die Logik dahinter ist einfach: die Unsicherheit über die (potentiell steigenden) Steuersätze in der Zukunft breitet sich aus, und die Investitionen, die Beschäftigung und der Verbrauch sinken. Die rückläufige Wirtschaftsaktivität kombiniert mit den Austeritätsmaßnahmen, um die öffentlichen Haushalte zu konsolidieren (bzw. Einsparungen im öffentlichen Sektor, Ausgabe-kürzungen im sozialen Bereich, usw. zu bewirken), schaden den wirtschaftlichen Grundlagen und Wachstumaussichten. Man kann das als einen Teufelskreis der schwachen Nachfrage, des rückläufigen Wirtschaftswachstums und der hohen Arbeitslosigkeit bezeichnen, dem nur mit Hilfe zusätzlicher finanzieller Mittel der Europäischen Zentralbank begegnet werden könnte. Das zusätzliche Geldangebot verursacht aber Inflation (Schmidt 2010).

Weil die politische Elite sich für die Austeritätsmaßnahmen entschieden hat, die aus Sicht der Wähler aber unpopulär sind, könnte es zu einer Situation führen, in der die Wähler in Folge der Krise die politische Elite austauschen. Im Kontext der Euro Verschuldungskrise haben mehrere Mitgliedstaaten des Eurogebietes die Regierungen gewechselt (s. Abbildung 3). Beispielsweise sind in Portugal, Griechenland und Italien die Premierminister zurückgetreten, weil sie das Misstrauensvotum gegen die Sparprogramme verloren haben oder ihre Popularität in den Augen der Öffentlichkeit stark gesunken war. In Italien wurde die Regierungsverantwortung an eine eher technokratische Regierung delegiert.

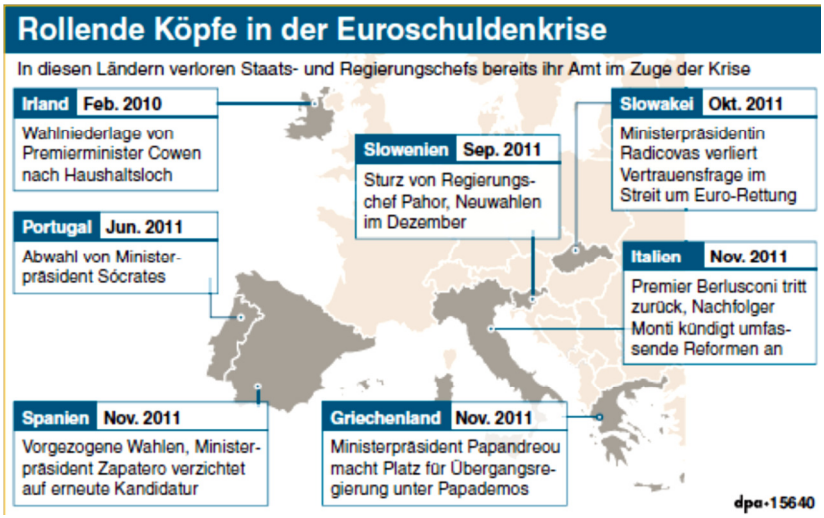

Abbildung 3. Regierungswechsel im Eurogebiet in 2010-2011. Quelle: Kalb 2012.

Währenddessen lässt sich die Tendenz beobachten, dass wegen den unpopulären Entscheidungen der Regierungsparteien die Popularität der nationalistischen anti-europäischen Parteien gestiegen ist, weil sie die Austeritätsmaßnahmen als gute Krisenlösungsmechanismen nicht anerkennen (Notermans 2012, 14). Obwohl theoretisch diskutiert wurde, ob die Staaten auf Sparprogramme verzichten und eine neue Währung einführen sollten (um durch die Wechselkursdynamik die Wettbewerbsfähigkeit wiederherzustellen), kommt es aus praktischer Sicht nicht in Frage, weil deswegen ein Austritt aus der Eurozone sowohl die Senkung der Investitionen als möglicherweise auch eine inflationäre Entwicklung verursachen oder verstärken würde (Lane 2010). Die Situation wurde eben dadurch komplizierter, dass die Mitgliedsstaaten unterschiedliche Vorstellungen sowohl von den Gründen her als auch von den Maßnahmen selbst zur Krisenlösung haben. Während beispielsweise Deutschland auf die Transparenz und die Austerität als die geeignetsten Mittel der Krisenlösung hingewiesen hat, waren Italien und Frankreich anderer Meinung und haben stets und besonders die Wichtigkeit der Erhöhung der Ausgaben der öffentlichen Verwaltung sowie der Investitionen betont.

Auf das potentielle Risiko einer breit angelegten Inflationssteigerung haben auch der Internationale Währungsfond und der Europäische Rat hingewiesen. Nach deren Meinung sollte man die Kontrolle dieses Prozesses auf die EU-Ebene beschränken und auch die Steuerzahler/Wähler/Politiker auf nationaler Ebene nicht daran beteiligen. Hier hat das Bewusstsein der lokalen Interessengruppen (Wähler/Steuerzahler/Politiker) hinsichtlich der Krisensymptome, den Umfang und die möglichen Konsequenzen in der Zwischenzeit kontrovers zugenommen. Die intensiven Diskussionen in den Mitgliedstaaten über die Schaffung der ESM dienen als ein gutes Beispiel dafür, dass die Wähler/Steuerzahler an Krisenlösungen beteiligt sein wollen.

Die Schaffung der EFSF sowie des ESM kann man aber auch als Beweis dafür anführen, dass die Mitgliedsstaaten und die Institutionen der EU fähig und bereit sind, zu kooperieren und die nationalen Interessen hintan zu stellen. Die Beteiligten auf der nationalen Ebene haben ihr Interesse an tiefer gehender Integration (bzw. die Bereitschaft, die Souveränität an supranationale Institutionen zu delegieren) ausgedrückt.

Im Kontext der europäischen Verschuldungs- und Wirtschaftskrise besteht das soziale Dilemma der Krise zusätzlich darin, dass die Beziehungen zwischen den exportierenden Ländern (z.B. Deutschland) und den importierenden Ländern (z.B. Griechenland) ausgeglichen sein sollten. Im geschlossenen regionalen Wirtschaftssystem sollte der Handelsüberschuss von der Nachfrage gedeckt sein. Dabei dominiert heute das Verständnis, dass die Zinssätze sinken und eine Konsolidierung der Zinssätze stattfinden sollte (Kregel 2011). Daraus folgend sollten die Finanzmärkte die Renditen der Staatsanleihen der Euro-Länder nicht differenzieren. Dabei hat aber der Wunsch nach (kurzfristiger) politischer Popularität die Priorität für wirtschaftlich vernünftiges und nachhaltiges Handeln in den Hintergrund gedrückt.

Zusammengefasst könnte man die Auswirkung der verschiedenen Krisenmaßnahmen folgendermaßen beschreiben.

Erstens, auf Basis der Entwicklungen während der Europäischen Verschuldungskrise könnte man behaupten, daß politisch wichtige (oder sogar symbolischen), aber aus wirtschaftlicher Sicht komplizierte Phenomena (wie z.B. Euro) die Politiker dazu gezwungen haben, zwischen politischen und wirtschaftlichen Kosten und Nutzen zu wählen.

Zweitens, aus theoretischer sowie empirischer Sicht hat man bisher keine Win-Win Strategie entwickelt, um Popularität zu gewinnen und dabei gleichzeitig Reformen durchzuführen, die die Nachhaltigkeit der Wirtschaft garantieren.

Drittens, was temporäre Rettungsmaßnahmen (z.B. Schuldenerlass oder der so genannte „Haarschnitt“ für Griechenland und Portugal, wobei die privaten Gläubiger teilweise auf ihre Forderungen verzichtet haben), hatten die politische Elite und die

Wähler der Eurozone-Partner eingeschränkt die Möglichkeit, aktiv an diesen Prozessen teilzunehmen und ihre Meinung dazu kund zu tun.

Viertens, der Zeitraum, als der Ankauf von Staatsanleihen der notleidenden Euro-Staaten beschlossen wurde, ist durch die enge Zusammenarbeit der politischen und wirtschaftlichen Elite und der supranationalen administrativen Elite charakterisiert, um die fiskalischen Spannungen zu mildern, die Zinskosten der hoch verschuldeten Länder zu senken und den Nationalstaaten mehr Zeit für Reformen zu geben. Die Unterstützung der Bond-Märkte hat auch den Interessen der wirtschaftlichen Elite gedient (außer der kleinen Anzahl von Privatanlegern, die gegen den Euro spekuliert haben).

Fünftens, das LTRO-Programm wurde dafür initiiert, der politischen Elite der hoch verschuldeten Staaten des Eurogebiets mehr Zeit zu geben, um die Reformen und Sparprogramme in Angriff zu nehmen und dabei die steigenden Anleiherenditen zu eliminieren. Daher ist die Auswirkung der LTROs eher kurzfristig gewesen.

Da die Schaffung der EFSF und des ESM nicht im Rahmen der EU-Verträge und den üblichen Verfahren stattgefunden hat, sondern die Mitgliedsstaaten und die politische Elite der EU dafür ein Sondermandat bekommen haben, spielten sowohl die Bürger der EU als auch die internationalen Finanzinstitutionen dabei nur eine sekundäre Rolle. Die intensiven Diskussionen in den Mitgliedstaaten über die Schaffung der ESM zeigen aber deutlich, dass die Wähler/ Steuerzahler an der Krisenlösung mehr beteiligt sein wollen.

Aus theoretischer sowie empirischer Sicht existiert insoweit keine Win-Win-Lösung, um gleichzeitig Popularität zu gewinnen und Reformen durchzuführen, die die Nachhaltigkeit der Wirtschaft garantieren.

Zusammenfassung

Weil die europäische Verschuldungs- und Wirtschaftskrise weitreichende Konsequenzen für andere Weltregionen und für verschiedene Interessengruppen (u.a. die Staatsbürger/Wähler und Finanzmarktteilnehmer) hat, muss man mehr Aufmerksamkeit den fundamentalen Fragen widmen, was sowohl den Umfang als auch die Lösungsstrategien der Krise angeht. Die vorliegende Studie fokussiert sich auf das grundlegende Dilemma zwischen politisch und wirtschaftlich rationalem Handeln. Sie unternimmt den Versuch, die Krisenmaßnahmen aus der Sicht der Beteiligten zu analysieren. Dabei thematisiert sie die Unterscheidung in fünf Kategorien der Beteiligten (die wirtschaftliche Interessengruppen; die politische Elite; die Finanzmarktteilnehmer; die Staatsbürger/Wähler; die an der Krise beteiligten Institutionen der EU und die internationalen Finanzinstitutionen). Die Analyse hat gezeigt, dass aus politischer Sicht symbolische, aber aus wirtschaftlicher Sicht auch komplizierte Phänomena (wie z.B. Euro) die Politiker dazu gezwungen haben, zwischen politischen und wirtschaftlichen Kosten und Nutzen zu wählen, und dass daraus keine Win-Win Strategie existiert, um gleichzeitig die politische Popularität zu gewinnen und Reformen durchzuführen,

die die Nachhaltigkeit der Wirtschaft garantieren. Weil einige von den Initiativen, die die Euro-Krise eindämmen sollten, nicht im Rahmen der EU-Verträge und den üblichen Verfahren stattgefunden haben, sondern die Mitgliedsstaaten und die politische Elite der EU dafür ein Sondermandat bekommen haben (z.B. die Schaffung der EFSF und des ESM), spielten einige Interessengruppen (z.B. die Bürger der EU, die internationalen Finanzinstitutionen) dabei nur eine sekundäre Rolle. *Der Umstand, dass aber zeitgleich in den Mitgliedsstaaten* über die Schaffung der ESM intensive Diskussionen stattgefunden haben, macht deutlich, dass die Wähler/ Steuerzahler an einer Krisenlösung mehr beteiligt sein wollen. Einer transparenten, nachhaltigen und aus Sicht der Interessengruppen ausgewogenen Strategie wären dabei insgesamt gesehen größere Chancen einzuräumen, die Krise einzudämmern.

Literatur

1. **Alesina, A., Perotti, R.** (2010). Germany spending is not the cure. In: R. Baldwin, D. Gros and L. Laeven, Editors, Completing the Eurozone Rescue: What more needs to be done?, London: Centre for Economic Policy Research.
2. **Alexiou, C., Nellis, J.** (2012). Is the 'EURO' a Defunct Currency? International Journal of Economics & Financial Issues (IJEFI); Vol. 2 Issue 3, pp.296-303.
3. **Bernanke, B.** (2005) The Euro at Five: An Assessment." In The Euro at Five: Ready for a Global Role?, ed. Adam S. Posen, 179-190. Washington, D.C.: Institute for International Economics.
4. **Birch, Anthony H.** (1993). The Concepts and Theories of Modern Democracy. London: Routledge.
5. **Böcking, D.** (2012). Streit über Mega-Rettungsfonds: Gefährlicher Traum vom Geld im Überfluss. SpiegelOnline http://www.spiegel.de/wirtschaft/soziales/rettungsfonds-esm-euro-laender-streiten-ueber-unbegrenzte-mittel-a-847468.html
6. **Dahl, Robert A.** (1991). Democracy and its Critics. Yale University Press.
7. Daten: Die Arbeitslosigkeit (%) in 2001-2011, (Selektion der EU-Staaten). Quelle: http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database.
8. UNECE Statistical Database (2013). Daten: Die Industrielle Produktion (Index, 2005=100) in 1990-2011 (Selektion der EU-Staaten). Quelle: http://w3.unece.org/pxweb/dialog/Saveshow.asp?lang=1
9. **De Grauwe, P.** (2010). How to embed the Eurozone in a political union. In: R. Baldwin, D. Gros and L. Laeven, Editors, Completing the Eurozone Rescue: What more needs to be done?, London: Centre for Economic Policy Research.
10. Die Chronologie der Krise (2013), http://www.tagesschau.de/wirtschaft/chronologiefinanzmarktkrise100.html
11. **Eichengreen, B.** (2007).The Break-Up of the Euro Area,. NBER Working Paper no. 13393 (September).
12. **Eichengreen**, **B.** (2009), "Was the euro a mistake?", VoxEU.org, 20 January.
13. EU über Krisenplan zerstritten (2012). http://web.de/magazine/finanzen/euro-krise/16460592-eu-beraet-umbau-eurozone.html
14. Eurostat (2012),

http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database
15. EZB Leitzins – Zinssatz der Zentralbank von Europa. (2013) http://de.global-rates.com/zinssatze/zentralbanken/zentralbank-europa/ezb-zinssatz.aspx
16. **Freeman, R. E.** (1984) Strategic Management: A stakeholder approach" Boston, Pitman
17. **Held, D.** (2006). Models of Democracy. Stanford University Press.
18. **Hummer, W.** (2012). Neues Anleihenankaufsprogramm (OMT) der EZB als „Stein der Weisen"? EU-Infothek, 2012. http://www.eu-infothek.com/article/neues-anleihenankaufsprogramm-omt-der-ezb-als-stein-der-weisen-teil-1
19. **Inglehart, R.** (1997). Modernization and Postmodernization. Cultural, Economic, and Political Change in 43 Societies. Princeton University Press.
20. IWF prophezeit Euro-Zone anhaltende Rezession. http://www.zeit.de/wirtschaft/2013-01/iwf-euro-rezession
21. **Kalb, J.** (2012). Von der Staatsschuldenkrise zur politischen Krise in der Europäischen Union? In: Die Euro und Die Schuldenkrise in Europa. Deutschland & Europa. Kapitel 1.
22. **Kregel, J.** (1999). Currency Stabilization through Full Employment: Can EMU Combine Price Stability with Employment and Income Growth? Eastern Economic Journal 25, no. 1.
23. **Kregel, J.** (2011). Debitors´Crisis or Creditors`crisis? Who pays for the European sovereign and subprime mortage losses?, Public Policy Brief no 121, Levy Economics Institute of Bard College
24. **Lane, P.** (2010). Rethinking national fiscal policies in Europe. In: R. Baldwin, D. Gros and L. Laeven, Editors, Completing the Eurozone Rescue: What more needs to be done?, London: Centre for Economic Policy Research.
25. **Lipset, S. M.** (1959). "Some Social Requisites of Democracy: Economic Development and Political Legitimacy". American Political Science Review **53** (1): 69–105.
26. **Mitchell, R. K., B. R. Agle, and D. J. Wood** (1997). Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What really Counts., Academy of Management Review 22(4), pp. 853 - 888.
27. **Mugge, D.** (2011). From Pragmatism to Dogmatism: European Union Governance, Policy Paradigms and Financial Meltdown. New Political Economy vol. 16, no. 2, pp. 185-206.
28. **Notermans, T.** (2012) Predatory Preferences and external Anchors: The Political Sources of European Imbalances. Baltic Journal of European Studies, Vol 2, No 2 (12) pp. 8-20.
29. **Papadimitrou, D. B., Wray L. Randall** (2011), Euroland in Crisis as the Global Meltdown Picks Up Speed, Working Paper no. 693, Levy Economics Institute of Bard College pp 1-29.
30. **Przeworski, A.** (1991). Democracy and the market: Political and economic reforms in Eastern Europe and Latin America. New York: Cambridge University Press.
31. **Schmidt, V. A.** (2010) "The European Union's Eurozone Crisis and What (not) to do about it" Brown Journal of World Affairs vol. XVII, issue I (Fall/Winter 2010), pp. 199-214.

32. **Thesing, G.** (2012). EZB bezeichnet OMT als notwendiges Instrument in Ausnahmelage. http://www.welt.de/newsticker/bloomberg/article109764322/EZB-bezeichnet-OMT-als-notwendiges-Instrument-in-Ausnahmelage.html
33. **Turner, J. R., V. Kristoffer,** et al., Eds. (2002). The Project Manager as Change Agent. London, McGraw-Hill Publishing Co.
34. UNECE Statistical Database, (2013) http://w3.unece.org/pxweb/dialog/Saveshow.asp?lang=1
35. **Van Schendelen, M. P. C. M.** (2002) Machiavelli in Brussels: The Art of Lobbyin the EU, Amsterdam University Press.
36. Vertrag zur Einrichtung des Europäischen Stabilitätsmechanismus. http://www.eurozone.europa.eu/media/582866/02-tesm2.de12.pdf
37. **Welfens, P. J. J.** (2012). Euro-Krise: Dynamik und Überwindungen. http://www.sachsen-anhalt.de/fileadmin/Elementbibliothek/Bibliothek_Politik_und_Verwaltung/Bibliothek_LpB/Politiklehrertage_2012fff/Halle2012welfenseuro.pdf
38. **Wentzel, D., Beck, H.** (2012). Ist der Euro noch zu retten? In: Die Euro und Die Schuldenkrise in Europa. Deutschland & Europa. Kapitel 4.
39. **Zielonka, J.** (2006). Europe as Empire. The Nature of the Enlarged European Union. Oxford University Press.

KOKKUVÕTTED

ZUSAMMENFASSUNGEN

SUMMARIES

VARADE HINNAMULLID JA REAALKURSS MAJANDUSKOOLKONDADE LÄHENEMISTE VALGUSES

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Tartu Ülikool

Rahapoliitika ja majanduspoliitika laiemalt sõltuvad valitsevate majanduskoolkondade nägemustest. Valitsev koolkond majanduses sõltub hiljutistest kogemustest reaalmajanduses. USA finants- ja kinnisvarakriis aastatel 2007-2009 kompromiteeris usku neoklassikalisse indiviidide ratsionaalsuse eeldusesse ja monetarismi. Tähelepanu väärivad seega teisedki majanduslikud koolkonnad, näiteks uus keinsistlik majandusteadus (ingl. k. New Keynesianism). Käesolevas artiklis vaadeldakse monetarismi ja uue keinsisliku majandusteaduse erinevusi lähtudes huvist varade hinnamullide ja reaalkursimullide võimaliku esinemise vastu Ida-Euroopa riikide majandustes. Finantssektori hinnamullid muutuvad kergesti liialdusteks reaalmajanduslikes näitajates. Võib küsida, kas teistsugused majandusteoreetilised eeldused ja teistsugune majanduspoliitika oleks Balti riikide majandusi päästnud äärmuslikust volatiilsusest aastatel 2007-2009. Alternatiivsete teooriate analüüs on vabas ühiskonnas lubatud sõltumata võimulolevast erakonnast. Artikli alguses võrreldakse monetaristliku ja uue keinsistliku majandusteaduse eelduste erinevusi. Edasi liigutakse uue keinsistliku majandusteaduse ja käitumusliku rahanduse poolt pakutavate kriisiselgituste juurde. Seejärel selgitatakse USA ja arenevate turgude hinnamulle. Lõpuks esitatakse süntees ja ettepanekud.

Neoliberalismi lõid 1930-ndatel aastatel Austria majandusteadlased Friedrich Hayek ja Ludwig von Mises vastukaaluks sotsialismile ja fašismile. Ellu rakendati need lähenemised 1980-ndatel aastatel. Monetaristide arvates põhjustab majandustsükleid ebastabiilne ja juhuslik majanduspoliitika. Uus keinsistlik majandusteadus loodi 1980-ndatel aastatel vastukaaluks uuele klassikalisele majandusteadusele. Uue keinsistliku majandusteaduse suuna tuntumad autorid on Stanley Fischer, Edmund Phelps ja John Taylor.

Reaalkursi osas usuvad monetaristid ostujõupariteedi kehtimist ja nende arvates muudab rahahulga suurendamine vaid nominaalseid hindu ning reaalsuurused nagu hinnatase ja reaalkurss jäävad mõjutamata. Keinsistid on valmis nägema pikaajalisi hälbeid ostujõupariteedist ja seega on reaalkurss oluline kontseptsioon majandusanalüüsis. Enam kui 100 aasta andmeid kasutades on leitud, et ostujõupariteet kehtis ajutiselt, kuid ei kehtinud üleüldiselt (Lee *et al.*, 2007). Keinsistid näevad majanduses piisavalt palju hõõrdumisi, mis takistavad hindadel lühiperioodil ühtlustumast. Sellest tuleneb keinsistide oluline tunnus, milleks on usk hindade jäikusesse. Uus klassikaline majandusteadus leiab, et hinnad ei ole jäigad seoses ratsionaalsete ootuste kehtimisega. Kuigi keinsistid üldiselt pooldavad adaptiivsete ootuste kehtimist, siis uue keinsistliku majandusteooria järgi on ettevõtete ja majapidamiste ootused ratsionaalsed. Sellegipoolest tagavad neil turu

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ebaefektiivsused jäigad nominaalhinnad ja palgad. Uus keinsistlik majandusteadus toetub muuhulgas käitumuslikus rahanduses väljatoodud ideedele turu ebaefektiivsusest. Uue keinsistliku majandusteaduse pooldajad toovad välja, et (Cunningham):
1) ratsionaalsete ootuste teooria eeldab ebareaalselt tarku majandusagente;
2) ratsionaalsus on piiratud ja
3) eksisteerivad strukturaalsed takistused.

Nad viitavad kapitaliturgude ebatäiuslikkusele. Näiteks aktsiaemissioonide korraldamine võimaldab jagada ettevõtte riski investoritega, kuid raskel ajal pole see võimalik ja ettevõtted muutuvad riskikartlikumaks (Cunningham, p. 21).

Käitumusliku rahanduse ootuste teooria (ingl. k. Prospect Theory) abil on näidatud indiviidide ebaratsionaalset käitumist finantsturgudel, mille näiteks on võiduga sama suure finantskaotuse valulisem tajumine, mis põhjustab kauplejate aktsiatest loobumist langusperioodil sõltumata hinnast ja toob langusliikumistega liialdamise. Tõusuperioodil tõukavad tõusu positiivse tagasiside efekt, karjainstinkt ja liigne enesekindlus. Ootuste teooria riskikartlikkuse kontseptsioon aitab selgitada turgude ebatäiuslikkust ja keinsistlikku palkade jäikust (Bhaskar 1990).

Monetaristliku seisukoha järgi peaksid mürakauplejad olema kahjumlikud ja kaduma turult. Sellele seisukohale on vastu vaielnud legendaarne ja edukas investor George Soros, kes leidis, et finantsturud ise, ilma väliste tegurita, tekitavad varade hinnamulli ja seejärel kokkuvarisemise (Soros 2011).

Võrdlemisi edukalt on finantskriiside olemust selgitanud käitumusliku rahanduse autor Hyman Minsky. Kuigi ta oli keinsist, oli ta vastu erasektori võlakoormuse suurele kasvule. Samuti vastustas ta 1980-ndate aastate finants-deregulatsioonipoliitikat. Minsky't mõjutasid Joseph Schumpeter ja Wassily Leontief (Wikipedia: Hyman Minsky). Minsky mudelid seostasid majandustsüklid endogeensete investeerimismullidega. Headel aegadel kasvavad ettevõtete rahavood suuremaks laenude teenindamiseks kuluvast tasemest. Järgneb eufooria, mis viib laenukoormuse suuremaks, mida suudetakse jooksvatest tuludest teenindada. Järgneva kriisi ajal karmistavad pangad laenustandard niipalju, et väärt laenuvõtjad jäävad rahata. Järgneb majanduslangus. Minsky näitas, kuidas finantsturgude liialdused mõjutavad reaalmajandust. Minsky arvates ei ole buumid ja kollapsid välditavad majanduspoliitilise sekkumiseta. Minsky soovitustega hakati rahapoliitikas arvestama tõsisemalt peale 2008. aasta kriisi (Yellen, 2009).

Minsky finantsilise ebastabiilsuse hüpoteesi järgi põhjustab kriisi erasektori võla kuhjumine. Ta eristas kolme tüüpi laenuvõtjaid: 1) klassikaline laenaja, 2) spekulatiivne laenaja ja 3) ponzi laenaja. Esimene suudab tasuda jooksvast tulust intresse ja põhiosa makseid, teine suudab tasuda intresse, kuid peab refinantseerima ja kolmas ponzi laenaja ei suuda isegi intresse tasuda ning tema püsimiseks peavad hinnad tõusma. Mulli tekkimisel kasvab spekulatiivsete ja ponzi laenajate osatähtsus. Kollapsi saabumisel kaotavad krediidistandardite karmistumise tõttu laenuvõimaluse isegi klassikalised laenajad. Paul McCulley PIMCO-st leidis, et

USA kinnisvarakriisieelsel ajal keskendusid laenuandjad ponzi-laenajatele kui kõige atraktiivsematele. McCulley väitis, et inimkäitumine on olemuselt majandustsüklit võimendav ja seetõttu kogeb kapitalistlik majandus perioodiliselt inflatsiooni- ja deflatsiooniperioode. Seega peaksid poliitikategijad ajama tsüklit tasandavat poliitikat.

Viimastel aastatel pidi USA majandus elama üle 80 aasta suurima tööhõive ja kinnisvarahindade languse. Tarbimise vähenemine USA-s avaldas võimendatud negatiivset mõju mujal maailmas, eriti arenevatel turgudel. Kriisile eelnes majandusajaloo üks suurim spekulatiivne mull USA kinnisvaras ja vähemalt määral aktsiahindades. Aktsiahinnad saavutasid tipu aastal 2000 ja kinnisvarahinnad aastal 2006. Kinnisvarahindade mull olid seotud palju suurema erasektori laenukoormuse kasvuga kui aktsiamull. Seega oli see palju ohtlikum ja veaks võib pidada Föderaalreservi intressimäärade piisavat tõstmatajätmist aastatel 2002-2006. Selle põhjuseks võis pidada Alan Greenspani monetaristlikku rahapoliitikat, mis eelistas tegelemist alles spekulatiivsete mullide tagajärgedega, sest mulle võis pidada ratsionaalseteks. Tema eelkäija demokraat ja keinsist Paul Volcker suutis varade hinnamullidega 1970-ndate lõpus ja 1980-ndate esimesel poolel võidelda tõstes tugevalt intressimäärasid. Tema poliitika tõi USA majandusele ja kapitalismile edu, mis asetas kommunistliku süsteemi selgesse halvemusse ja viis selle kokkuvarisemiseni. Teised võimalikud seletused Greenspani poliitika leebusele oleks püüd meeldida poliitikutele, kes püüdsid hoida presidenditooli vabariiklaste käes säilitades jõukuse efekti kaudu valijate rahulolu Bushi poliitikaga või püüd meeldida Wall Streeti pankuritele, kes teenisid varade hinnamullide toel rekordilisi kasumeid.

Helded krediiditingimused USA-s ja rahapakkumise kasv panid sealseid rahajuhte otsima uusi ja huvitavaid investeerimisvõimalusi arenevatel turgudel nagu Hiina ja Venemaa. Balti riigid ei jäänud samuti kinnisvara- ja aktsiamullidest puutumata. Kasvanud nõudlus kõikvõimalike ressursside järele tõstis tarbijahindu, palku ja reaalkurssi ehk suhtelist hinnataset. Liialdused aastal 2007 tõid allapoole suunatud kohandumisvajaduse aastal 2009. Võib nentida, et buumi ajal aitasid poliitikud rahva spekulatiivseid liialdusi võimendada roosade ja optimistlike lubadustega. Hoiatusi võis käsitleda riigivastasusena. Küsimus majandusteadusele laiemalt oleks, kas spekulatiivse hinnamulli äratundmine on endiselt sedavõrd raske, et mulli üleskütmisega tuli nõustuda? Põhjuseid tuleb ilmselt otsida ideoloogilisest taustast. Nimelt leiab keskendumine lühiajalistele kasumitele ja kaugema tuleviku unustamine toetust neoliberaalsest mõtlemisest. Aktsiakauplejate maailmas kehtib reegel, mille järgi langeb kaupleja sellesse lõksu, mille kohta tal seni veel kogemust ei olnud. Lõksuks võis olla ekstreemselt neoliberaalne mõtlemine, lühiajaline fookus ja liigne ahnus. Samuti võis panustada iseseisva rahapoliitika puudumine Eestil või siis Euroopa-ülese rahapoliitika sobimatus.

Tulevikku vaadates võib küsida, kas tulevikus võivad spekulatiivsed liialdused muutuda nii suureks, et põhjustavad majandussüsteemi kokkuvarisemist nagu prognoosis George Soros oma raamatus „Globaalse kapitalismi kriis: avatud ühiskonda ähvardavad ohud". Lagunemisele viitab püüd kehtestada finantstehingute

maksu ja kapitalikontrolli kehtestamise heakskiit arenevatele turgudele IMF-i poolt (IMF, 2010).

Kokkuvõttes võib öelda, et finantsturud mõjutavad tugevalt majandustsüklit ja kui finantsturgudel esinevad ekstreemselt ulatuslikud buumid ja kollapsid, siis esinevad need ka reaalmajanduses. Uue keinsistliku majandusteaduse esindaja ja Iisraeli keskpanga juht Stanley Fischer leidis juba 1990-ndatel, et makromajanduslik stabiilsus on majandusliku heaolu eeltingimuseks (Fischer 1993, p. 23). Lisaks põhjustavad varade hinnamullid ressursside väära jaotust ja reaalkursi hälvet. Üldine usalduse vähenemine majanduses ei tule jõukuse loomisele kasuks.

Kuigi üldine majandusvabadus peaks andma vabaduse osaleda varade hinnamullide tekitamises ja peaks soovitama vältida majanduspoliitilist sekkumist hinnamullidesse, siis kui kokku hinnata seda majanduspoliitilist ja rahapoliitilist sekkumist, mis järgnes kriisi tagajärgedega tegelemisele, võib oletada, et kokkuvõttes on sekkumise määr suurem kui oleks olnud mulli kasvu piiramisel intressimäärade tõstmisega. Kvantitatiivse rahapakkumise programmidega on raha hulka suurendatud nii palju, et on raske uskuda usalduse püsimist raha vastu tulevikus, millele viitab ka kulla hinna tõus ja püsimine kõrgel tasemel. Raske on ette kujutada suuremat sekkumist majandusse valitsuse poliitikaga.

Üldiselt pakub vaba turg õige hinna leidmise võimalust, kuid teatud juhtudel hakkavad turul olukorda kujundama spekulatiivsed kauplejad, kes pööravad ratsionaalsete argumentide ja fundamentaalide asemel rohkem tähelepanu tõusutrendile, millest nad ei soovi maha jääda ja turul hakkavad domineerima mänguri mõtteviisiga kauplejad, kes koordineerivad oma ostutehinguid tehnilise analüüsi abil. Samamoodi püüdsid laenubuumi ajal üksteist üle trumbates riskivõtmist suurendada kommertspangad Eesti turul. Kauplejate trendivõimendavast käitumisest kirjutas George Soros oma raamatus „The Alchemy of Finance" tuues sisse refleksiivsuse mõiste, mis omakorda pärines filosoof Karl Popper'ilt (Soros 1987, p. 27-45). Selle järgi moodustub põhjuse ja tagajärje vahel mõlemasuunaline seos, kus nähtused võimendavad teineteist. Seega liiguvad turud enamuse ajast hoopis tasakaalust eemale, mitte tasakaalu suunas, nagu väidaks keskmine majandusteadlane. Trend võib muutuda, kuid see juhtub alles pärast äärmuse saavutamist. Soros leidis, et selline kauplejaid iseloomustav käitumine on iseloomulik ka kommertspankadele laenustandardite muutmisel (Soros, 2008)

Võib oletada, et kui erinevuste suurenemine euroliidu sees suureneb ning vajadus erineva rahapoliitika järele euroliidus suureneb, võib ühtne rahapoliitika esile kutsuda uusi varade hinnamulle. Aastatel 2010-2011 muutus olukord Euroopa põhjapoolses osas juba üsna kuumenenuks.

Lahenduseks pakuvad mõned autorid aktiivsemat võitlust varade hinnamullidega. Näiteks endine Fed'i nõukogu liige Frederick S. Mishkin soovitas keskpankadel kasutada edaspidi rohkem vastutsüklilist poliitikat potentsiaalsete krediidimullide vastu ning mitte jääda lootma vaid tagajärgedega tegelemisele (Mishkin 2011, p. 66). Tema soovitus on kooskõlas Minsky hoiatusega erasektori võla kasvu eest.

Otsest vajadust finantstehingute maksustamiseks siit ei tule. Praktikud on võitlust varade hinnamullidega tõsisemalt võtma hakanud. New Yorgi Föderaalreservi juht William Dudley ütles 2009. aastal BIS'i konverentsil, et varade hinnamullid on tõsine oht reaalmajandusele ja võitlus nendega peaks olema Fed'i ülesanne (Shostak, 2009). Turgude olemuslikku ebastabiilsusse hakkas uskuma Inglise Panga juht Mervyn King (Soros, 2011).

Üldfilosoofiline küsimus seoses varade hinnamullidega on, kas ühel inimgrupil, kes on langenud käitumusliku rahanduse kirjeldatud mentaalsetesse lõksudesse, on õigus muuta majanduskeskkond pikaks ajaks ebastabiilseks kõikide teiste jaoks? Finantsturu liialdust võimendavad kauplejad ei võta oma tuludes ja kuludes arvesse ühiskonnale põhjustatud negatiivset efekti.

Põhisoovitus indiviididele ja majanduspoliitikakujundatele on võtta otsustes arvesse inimkäitumise psühholoogilisi külgi ja mitte jääda liigsel määral lootma turuosaliste ratsionaalsusele ja eeldusele, et turgudel on alati õigus. Tuleks parendada teadmisi ja analüütilist kompetentsi finantsturgude hinnaliikumiste paremaks mõistmiseks. Tuleks loobuda liberaalsest ignorantsusest homsest kaugema tuleviku suhtes isiklikul ja majanduspoliitilisel tasandil.

GRUNDLEGENDE ANSÄTZE ZUR STANDORTHEORIE EINES ÖFFENTLICHEN UNTERNEHMENS

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Die Standorttheorie ist weitgehend auf private Unternehmen ausgerichtet. Eine **spezielle Standorttheorie für öffentliche Unternehmen** wurde kaum entwickelt. Allerdings besteht eine umfangreiche Literatur über Standorte von **public facilities.** Sie beinhalten meist Anlagen oder Infrastrukturteile, die dazu dienen, private Haushalte und Unternehmen mit Leistungen zu versorgen. Obwohl manchmal Standorte in Verfolgung öffentlicher Ziele bestimmt werden, interpretiert man sie nicht als selbst entscheidende ökonomische Einheiten und Wirtschaftssubjekte mit eigenem Management. Öffentliche Unternehmen sind aber laut Definition eigene selbst entscheidende Wirtschaftseinheiten.

Ein **öffentliches Unternehmen** besitzt Eigenheiten eines privaten Unternehmens, denn es verkauft marktorientiert seine produzierten Güter und Leistungen. Andererseits sind solche Unternehmen verpflichtet öffentliche Ziele zu verfolgen. Diese Ziele sind in Satzungen, Gesellschaftsverträgen, Gesetzen und Verordnungen und seitens der Eigentümer, einer Regulierungsbehörde festgelegt oder werden vom Management des öffentlichen Unternehmens beschlossen[2].

Die Gründe für das Fehlen einer adäquaten Standorttheorie sind zweifach. Zum einen fehlt eine solche Theorie und zum anderen ist eine entscheidungstheoretisch ausgerichtete Theorie der öffentlichen Unternehmung, die sich in Standorttheorien integrieren lässt, wenig entwickelt Deshalb wird in diesem Beitrag versucht, beide Theoriengebäude zu verbinden.

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[2] Ein öffentliches Unternehmen ist ein öffentliches Wirtschaftssubjekt, das Güter im Sinne öffentlicher Ziele produziert und anderen Wirtschaftssubjekten zur Verfügung stellt. Es befindet sich überwiegend in öffentlichem Eigentum. Das Management besitzt einen auf Dauer gewidmeten Bestand an Produktionsfaktoren und besitzt Entscheidungsspielräume zumindest bezüglich der Produktion und der Leistungsabgabe. (Eichhorn, Friedrich 1976, S. 52, S. 76). Eine Verwaltung ist in die Finanzplanung des Trägers (Eigentümers) voll integriert. Ein öffentliches Unternehmen ist aus dem Haushalt des öffentlichen Eigentümers herausgelöst und erscheint im Budget des Trägers nur mit Gewinnabführungen oder Zuwendungen des Eigentümers.

Zu diesem Zweck werden zunächst die **Standortentscheidungs-situationen** und die Standortfaktoren öffentlicher Unternehmen angesprochen. Standortentscheidungen fallen im Zuge der Gründung, der Expansion, der Umsiedlung, der Schrumpfung und der Schließung eines öffentlichen Unternehmens an. Die **Standortentscheidungen** sind entwicklungsbezogen im Falle des Aufgabenwachstums, etwa von Nachfragesteigerungen, der Gründung von Tochterunternehmen und der Beteiligung an Clustern sowie der Entwicklung neuer Aufgaben oder im Zuge regionalen Wettbewerbs. Andererseits können auch Nachfragerückgänge, Finanzkrisen usw. Standortentscheidungen bewirken. Ferner fallen Standortentscheidungen an, wenn der öffentliche Sektor restrukturiert wird, etwa bei Eigentümerwechsel, Public Private Partnerships, Nationalisierungen und Kommunalisierungen, Konzentrationen, Veränderungen von Führungskonzeptionen, Funktional- und Territorialreformen, Veränderungen von Koordinierungen und EU-Regulierungen, usw. Standortentscheidungen als Folge politischer Veränderungen treten infolge von Transformationen, Vereinigungen, Europäischer Integration, militärischen Allianzen, Regierungswechseln, Wahlergebnissen, der Änderung öffentlicher Ziele und von Kriegszuständen auf. **Typische Standortfaktoren** öffentlicher Unternehmen betreffen die Charakteristika ihrer finanziellen Sphäre, z.B. Kapitalausstattung und -zufuhr seitens des öffentlichen Trägers. Standortfaktoren der Leistungssphäre betreffen die Produktion, z.B. vorgeschriebene Produktionsfunktionen, Produktionsvorschriften, das Marketing, z.B. Liefer- und Bedienungszwang, sowie die Beschaffung, z.B. Ausschreibungen, die teilweise Beschäftigung von Beamten, usw. Besondere Koordinationsverfahren sowie die regionale Konkurrenz bei Standortentscheidungen sind bezüglich des Eigentümers und anderer öffentlicher Träger zu beachten. Ferner bilden die öffentlichen betrieblichen, ökonomischen, sozialen und politischen Ziele wichtige Standortfaktoren, z.B. Wohlfahrtsmaximierung, Wählerzustimmung. Darüber hinaus beinhalten ökonomische, soziale, politische, administrative und natürliche Umweltbedingungen wichtige Standortfaktoren. Dabei spielt auch die Lokalisierung einer oder mehrerer öffentlicher Unternehmen eine Rolle. Zu unterschiedlichen Standortfaktoren führen auch Mitent-scheidungskompetenzen von Managern oder von Entscheidungsträgern in Gremien sowie vertikale Koordinierungsformen mit dem Eigentümer und anderen Trägern, z.B. in Finanzierungs- und Planungsverfahren, oder die Wettberwerbs- und Marktformen, mit denen die öffentlichen Unternehmen konfrontiert sind. Die Standortentscheidungen fallen je nach der Zahl der Entscheidungsträger öfters unterschiedlich aus.

Grundlage für eine entscheidungsorientierte Standorttheorie öffentlicher Unternehmen ist ein **einfaches Modell der öffentlichen Unternehmung.** Das Modell umfasst Nutzenfunktionen des Managements, eine Produktionsfunktion, die Beschaffung von Produktionsfaktoren und die Absatzverhältnisse sowie Selbstfinanzierung im Sinne von Kostendeckung. Die Maximierung des Nutzens ergibt folgende Aussagen. Das Verhältnis der Grenznutzenänderungen des Managements bei Änderung unterschiedlicher Faktoreinsätze muss dem Verhältnis der Grenzgewinne bei Änderung der Faktoreinsätze gleichen. Der Produktpreis hat den Durchschnittskosten zu gleichen. Je nach dem ob das Management Leistung maximiert, Leistung und Arbeitseinsatz vergrößern möchte, den Arbeitsaeinsatz

maximiert, maximalen Gewinn anstrebt oder seinen Nutzen aus Gewinn und Arbeitseinsatz maximiert, resultieren unterschiedliche Lösungen für Preise, Ausbringungsmengen usw. Nur die Leistungsmaximierung und die Gewinnmaximierung führen zu „effizienten“ Lösungen.

Das Modell wird anschließend in die **traditionelle industrielle Standorttheorie** mit einem Entscheidenden integriert. Ein Launhardt Weber Ansatz, wo verschiedene Orte beliefert und Produktionsfaktoren von etlichen Orten beschafft werden, Transportkosten anfallen. bei dem die Produktionsfunktion des öffentlichen Unternehmens standortabhängig ist, und Kostendeckung besteht, erlaubt folgende Aussagen. Falls das Management des öffentlichen Unternehmens seinen Nutzen maximiert, entspricht das Verhältnis der Grenznutzen aus Faktoreinsatzänderungen dem Verhältnis der Grenzgewinne, die aus den Faktoreinsatzänderungen resultieren. Der Preis gleicht der Höhe der Durchschnittskosten. Das Verhältnis der Änderung der Grenznutzen des Managements bei Verschiebung des Standortes in unterschiedliche Richtungen gleicht dem Verhältnis der Grenzgewinne bei diesen Standortverschiebungen. Standortabhängige Kosten und externe Effekte lassen sich im Modell berücksichtigen. Die Verbindung zum Hakimi Gülicher Theorem über Standorte in Transportnetzwerken kann hergestellt werden. Auf die Möglichkeiten mehrere Standorte zu belegen und die Brücke zu den Landschaftsstrukturmodellen zu schlagen, wird verwiesen. Verschiedene Operations Research Verfahren sind ebenfalls anwendbar. Allerdings hat man mit nicht-linearen Funktionen infolge der Nutzenfunktionen des Managements und der Kostendeckungsbedingung zu kämpfen. Gezeigt wird, wie sich Investitionsregeln für mengenmaximierende öffentliche Unternehmen übertragen lassen, wenn die Manager die standortabhängigen Kostenfunktionen gemäß ihren eigenen Zielen wählen. Falls Kapital an unterschiedlichen Standorten als differierende Kapitalstöcke aufgefasst wird, kann man Theorien des Kapitalaufbaus an Standorten entwickeln. Ohne Restriktionen bezüglich der Investitionsfinanzierung wird an einem Standort Kapital akkumuliert bis der Grenznutzenzuwachs des Managements so hoch wie der Grenznutzenverlust des Managements infolge erhöhter Zinszahlungen ausfällt. Mit konplizierteren Nebenbedingungen, fallen auch die Regeln für optimale Standorte diffiziler aus.

Gleicht die Nutzenfunktion des öffentlichen Unternehmens einer Net-Benefit-Funktion so lassen sich **wohlfahrtsmaximale Standorte** bestimmen. Der optimale Standort liegt dort, wo die entfernungsabhängigen sozialen Grenzbenefits den entfernungsabhängigen sozialen Grenzkosten bei Verschiebungen in unterschiedlichen Richtungen gleichen. Ferner muss das Verhältnis der Grenz-Netbenefits bei Faktorvariationen jenem der Grenzgewinne bei Faktorvariationen gleichen, Analoge Aussagen resultieren für den Fall von Wählerstimmenmaximierungen.

Das Modell des öffentlichen Unternehmens kann man zu einem **Principal Agent Modell** ausbauen, das die vertikalen Auseinandersetzungen zwischen dem Eigentümer und dem öffentlichen Unternehmen beschreibt. Übliche Prinzipal Agent Lösungen resultieren, falls ein mächtiger Eigentümer unterstellt wird, der dem

Management nur seinen Mindestnutzen lässt. Bei ausgeglichenen Machtverhältnissen lassen sich Lösungen mithilfe von Verhandlungstheorien bestimmen. Mehrere Entscheidungsträger sind tätig. Im ersteren Falle liegt der günstigste Standort dort, wo der marginale Nutzenzuwachs des Prinzipals der Mindestnutzenänderung des Agenten gleicht. Eine Verbindung zwischen Standorttheorie und Prinzipal Agent Theorie mag ebenfalls hergestellt werden. Für jeden Standort soll sich ein möglicher Standortkompromiss einstellen. Die Standorte werden nach den Nutzenverteilungen geordnet, eine Nutzenmöglichkeitskurve bestimmt und mittels einer weiteren Nutzenfunktion, z.B. eines weiteren Entscheidungsträgers, der optimale Standort gefunden. Ansonsten dienen Standortspiele zwischen Prinzipal (öffentlichem Träger und Management) zur Auffindung von Verhandlungslösungen, die je nach den Zielfunktionen, z.B. politische Ziele, ökonomische Ziele) und entsprechenden pay-offs zu unterschiedlichen Resultaten der Standortwahl führen.

Ferner haben die Autoren das **Pelzman Modell** der politischen Theorie des öffentlichen Unternehmens mit dem einfachen Modell der öffentlichen Unternehmung integriert. Jedoch unterstellen sie, dass der Prinzipal (Träger) Wählerstimmen erzielen möchte und das öffentliche Unternehmen Gewinne anstrebt. Für zwei Märkte, in denen das öffentliche Unternehmen engagiert ist, werden Preise festgelegt sowie Indifferenzkurven des Managements und des Trägers abgeleitet. Man bestimmt die pareto-optimalen Nutzenverteilungen und findet über eine Nashlösung eines Nicht-Konstant-Summenspiels eine Lösung. Anschließend erfolgte eine Anwendung dieses Modells auf die Standorttheorie. Für unterschiedliche Standorte eruiert man derartige Lösungen. Der beste Standort ist jener bei dem das höchstwertigste „Nashprodukt“ erzielt werden kann.

Die Anwendung der vorgestellten Ansätze auf einen öffentlichen Konzerns erfolgt in einem weiteren Aufsatz über „ Location Theory of a Trust Public Firms under Horizontal and Vertical Co-ordination”.

SANEERIMISMENETLUSE EBAÕNNESTUMISE PÕHJUSED EESTIS

Oliver Lukason, Artjom Urbanik
Taru Ülikool

Sissejuhatus

Tagamaks ajutiselt raskustesse sattunud, kuid muidu elujõuliste ettevõtete turule jäämise, sisaldavad enamike riikide maksejõuetusmenetlused saneerimise võimalust. Eestis võeti saneerimisseadus vastu 2008. aasta lõpus ning enne seda oli saneerimine võimalik pankrotiseaduse vahendusel. Vaatamata saneerimisseaduse kehtima hakkamisele on edukalt saneeritud ettevõtete hulk Eestis olnud väike. Näiteks 2009. aastal kuulutati välja 1562 ettevõtte pankrot ning saneerimisavalduse esitas 93 ettevõtet, kusjuures kinnitatud saneerimiskavasid oli ainut 6 tükki. Eelnevast tulenevalt on artikli eesmärgiks välja selgitada, millised on olnud ettevõtete saneerimismenetluse ebaõnnestumise põhjused Eestis. Vaatluse all on nii saneerimismenetluse seadusest tulenevad ebaõnnestumise põhjused kui ka edukalt ja ebaedukalt saneeritud ettevõtete saneerimiseelsed finantsnäitajad.

Varasemad saneerimise teemalised uuringud

Viimase paarikümne aasta jooksul on saneerimise teemal teostatud rohkelt uuringuid, kusjuures täheldatav on ka oluline variatsioon käsitletavate teemade osas. Saneerimismenetluse tulemuslikkust käsitlevad uuringud viitavad edukate saneerimiste vähesusele, kusjuures Ameerika Ühendriikide menetluse (Chapter 11) tulemuslikkus on Kontinentaal-Euroopa omast oluliselt kõrgem (Couwenberg 2001, Brouwer 2006). Samas peab menetluse tulemuslikkust hindavate uuringute puhul silmas pidama, kuidas on täpselt defineeritud edukas saneerimine (näiteks kas kava kinnitamine, kava täitmine või ettevõtte tegutsema jäämine peale kava täitmist). Laiemas plaanis määrab saneerimise edukuse ka õiguskeskkonna võlglase- või võlausaldajakesksus, kusjuures Kontinentaal-Euroopa õiguskeskkondasid peetakse pigem võlausaldaja sõbralikeks (Franks et al. 1996, Lopez Gutierrez et al. 2011).

Juhtimisteoorias seostatakse ebaedukat saneerimist ebaõnnestunud muudatustega ettevõtte tegevuses (ing. k. *turnaround*) (Chowdhury 2002, Sheppard and Chowdhury 2005). Täpsemalt võivad kerkida probleemid seoses muudatuste ajastusega ning muudatuste liigse fokuseerimisega operatiivsetele, mitte hädavajalikele strateegilistele muudatustele (Chowdhury 2002, Sudarsanam and Lai 2001, Barker III and Duhaime 1997). Mitmed uuringud vaatlevad ka ettevõtete saneerimiskõlbulikkust läbi varasemate finantsnäitajate. Laitinen (2011) leidis, et enamik saneerimismenetluses olevatest ettevõtetest on elujõuetud. Uuringutes on ka leitud, et edukaid ning ebaedukaid saneerimisi ei ole varasemate finantsnäitajate põhjal võimalik tuvastada (Poston et al. 1994, Laitinen 2009). Ettevõtete finantsnäitajate põhjal on võimalik välja tuua erinevad ebaõnnestunud saneerimise mustrid, kuid ettevõtete vahelistele erisustele vaatamata on iga ebaõnnestunud saneerimist iseloomustav mõnede finantsnäitajate väga kehv tase (Kärkinen 2010).

Eesti saneerimisseadus ja ebaedukas saneerimine

Eesti saneerimisseadus (SanS) jõustus 26.12.2008 ning vastava seaduse alusel on saneerimise ebaõnnestumine võimalik kolmel erineval ajahetkel, täpsemalt saneerimismenetluse algatamata jätmine, pärast saneerimismenetluse algatamist või saneerimiskava kinnitamise järgselt.

Vastavalt SanS §8 algatab kohus saneerimismenetluse kui saneerimisavaldus vastab tsiviilkohtumenetluse seadustikus ja SanS esitatud nõuetele ning kui ettevõtja on põhistanud, et: 1) tema maksejõuetuse tekkimine tulevikus on tõenäoline; 2) ettevõte vajab saneerimist; 3) ettevõtte jätkusuutlik majandamine on pärast saneerimist tõenäoliselt võimalik. Sama paragrahv ütleb ka, et saneerimismenetlust ei algatata kui: 1) ettevõtja suhtes on algatatud pankrotimenetlus; 2) on tehtud kohtumäärus ettevõtja sundlõpetamise kohta või toimub täiendav likvideerimine; 3) ettevõtja suhtes toimunud saneerimismenetluse lõppemisest on möödunud vähem kui kaks aastat.

SanS §39 märgib, et saneerimismenetluse võib ennetähtaegselt lõpetada üksnes enne saneerimiskava kinnitamist, täpsemalt järgnevatel põhjustel (§39 lõige 2 punktid vastavalt nende seaduses toodud numeratsioonile):
1) ettevõtja kaasaaitamiskohustuse rikkumise tõttu;
2) kui ettevõtja jätab tasumata saneerimisnõustaja või eksperdi tasu ja kulutuste katteks kohtu deposiiti kohtu määratud summa;
3) saneerimiskava kinnitamata jätmise tõttu;
4) vastuvõtmata saneerimiskava kinnitamise avalduse rahuldamata jätmisel;
5) vastuvõtmata saneerimiskava kinnitamata jätmisel;
6) ettevõtja avalduse alusel;
7) saneerimismenetluse algatamise eelduste äralangemise korral;
8) ettevõtja vara raiskamise või võlausaldajate huvide kahjustamise korral;
9) saneerimiskava tähtpäevaks esitamata jätmise tõttu;
10) nõude ebaselguse tõttu.

SanS §51 märgib, et kohus tühistab kinnitatud saneerimiskava (s.t. katkestab saneerimise; §51 lõige 1 punktid vastavalt nende seaduses toodud numeratsioonile):
1) kui ettevõtja on pärast saneerimiskava kinnitamist tunnistatud süüdi pankroti- või täitemenetluse kuriteos;
2) kui ettevõtja ei täida saneerimiskavast tulenevaid kohustusi olulisel määral;
3) kui saneerimiskava kehtivuse ajast vähemalt poole möödumisel on ilmne, et ettevõtja ei suuda saneerimiskavaga võetud kohustusi täita;
4) saneerimisnõustaja avalduse alusel, kui ei maksta tasu järelevalve teostamise eest;
5) saneerimisnõustaja avalduse alusel, kui ettevõtja ei osuta saneerimisnõustajale abi järelevalvekohustuse täitmisel või ei anna saneerimisnõustajale teavet, mida viimane vajab järelevalve teostamiseks;
6) ettevõtja avalduse alusel;
7) kui kuulutatakse välja ettevõtja pankrot.

Kasutada olevad andmed

Saneerimise ebaõnnestumise põhjused tuvastatakse Kohtute Infosüsteemist allalaaditud kohtulahendite põhjal. Kokku oli analüüsi jaoks võimalik kasutada 78 kohtulahendit, mis jagunesid järgnevalt: 20 juhul polnud saneerimismenetlust algatatud, 46 juhul saneerimismenetlus lõpetati enne saneerimiskava kinnitamist, 7 juhul kinnitatud saneerimiskava tühistati ning 5 juhul oli saneerimine edukas (st. analüüsi teostamise hetkel on saneerimiskavad kehtivad). Kohtulahendite põhjal tuvastati ka ettevõtted, mis võimaldas täiendava analüüsi teostamist kasutades ettevõtete saneerimismenetluse eelseid finantsnäitajaid. Iga ettevõtte jaoks arvutati välja neli suhtarvu, mis on alljärgnevas tabelis 1 toodud. Kõik suhtarvud arvutati kolme saneerimismenetluse aastale eelneva aasta kohta ning vastavat aastat märgitakse alltoodud tabelis 2 vastava alaindeksiga (s.t. 1 viitab näiteks saneerimismenetluse aastale eelnevale aastale).

Tabel 1. Analüüsis kasutatud finantssuhtarvud

Muutujate valdkond	**Muutujad**
Maksevõime	, s.t. $\frac{CA}{CL}$, s.t. $\frac{C}{CL}$
Kasumlikkus	$\frac{Puhaskasum}{M\_\_\_\_gitulu}$, s.t. $\frac{NI}{S}$
Kapitali struktuur	$\frac{Kohutused}{Varad}$, s.t. $\frac{L}{A}$

Allikas: autorite koostatud.

Analüüsi jaoks kasutatakse kahte klassifikatsiooni. Klassifikatsioon 1 jaotab ettevõtted kaheks selle alusel, kas saneerimiskava kinnitati või mitte: kinnitati (Grupp 1 – 12 juhtumit) ja ei kinnitatud (Grupp 2 – 46 juhtumit). Klassifikatsioon 2 jaotab ettevõtted kaheks selle alusel, kas saneerimine oli kokkuvõttes edukas: kehtiv saneerimiskava (Grupp 1 – 5 juhtumit) ja saneerimismenetluse ennetähtaegne lõpetamine või kava tühistamine (Grupp 2 – 53 juhtumit).

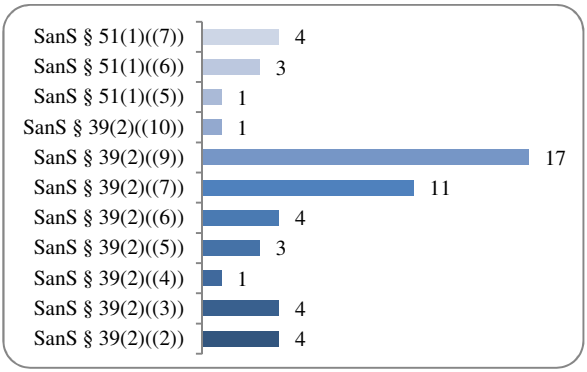
Analüüsi tulemused ja järeldused

Joonis 1 näitab 53 ettevõtte lõikes algatatud saneerimismenetluse lõpetamise põhjuseid. Domineerivad kaks põhjust: saneerimismenetluse algatamise eelduste äralangemine (n=11) ja saneerimiskava tähtajaks esitamata jätmine (n=17).

Tabel 2. Mediaanväärtused kahe klassifikatsiooni gruppide lõikes

Muutuja	Klassifikatsioon 1			Klassifikatsioon 2			Kokku
	Grupp 1	Grupp 2	p	Grupp 1	Grupp 2	p	
$\frac{L_1}{A_1}$	0,73	0,87	0,097	0,78	0,84	1,000	0,81
$\frac{L_2}{A_2}$	0,73	0,78	0,728	0,73	0,77	0,635	0,77
$\frac{L_3}{A_3}$	0,63	0,70	0,042*	0,64	0,67	0,635	0,67
$\frac{NI_1}{S_1}$	-0,04	-0,18	0,111	-0,02	-0,09	0,645	-0,09
$\frac{NI_2}{S_2}$	0,00	0,01	0,099	0,00	0,01	0,020*	0,00
$\frac{NI_3}{S_3}$	0,01	0,04	0,050*	-0,02	0,03	0,169	0,03
$\frac{CA_1}{CL_1}$	0,83	0,54	0,688	0,20	0,63	0,322	0,61
$\frac{CA_2}{CL_2}$	0,80	0,93	0,728	0,60	0,94	0,154	0,90
$\frac{CA_3}{CL_3}$	0,90	1,17	0,498	0,60	1,20	0,154	1,02
$\frac{C_1}{CL_1}$	0,01	0,01	0,226	0,01	0,01	0,645	0,01
$\frac{C_2}{CL_2}$	0,02	0,02	0,795	0,02	0,02	0,674	0,02
$\frac{C_3}{CL_3}$	0,03	0,02	0,146	0,03	0,02	0,138	0,02

* Olulisustõenäosus üle 0,05 pärast Yates'i korrektsiooni, tabelis esialgsed tulemused.
Märkus: pärast Yates'i korrektsiooni on kõik tulemused tasemel 0,05 ebaolulised.



Joonis 1. Saneerimismenetluse lõpetamise põhjused (n = 53 ettevõtet).

Saneerimise ebaõnnestumise põhjused viitavad selgelt asjaolule, et enamik ettevõtteid on olnud saneerimiseks kõlbmatud. Kahe klassifikatsiooni lõikes edukate ja ebaedukate ettevõtete finantssuhtarvude mediaanväärtuste võrdlus (vt. tabel 1) näitab, et ühelgi juhul pole nende väärtused kahe grupi lõikes statistiliselt oluliselt erinevad (p väärtused suuremad kui 0,05 peale Yates'i korrektsiooni). Teataval määral võib tulemusi mõjutada edukate grupis olevate ettevõtete väike arv, mida võimendab ka asjaolu, et osadel ettevõtetel pole mõnede aastate finantsandmeid Äriregistrile esitatud. Finantssuhtarvude väärtustest ilmnevad huvitavad asjaolud. Nimelt on ebaedukalt saneeritud ettevõtete puhul saneerimisaastale üleeelneva ning üle-üleeelneva aasta näitajad mitme finantssuhtarvu puhul paremad kui edukalt saneeritute puhul. Saneerimisaastale eelneval aastal on tendents vastupidine ning üldiselt on edukalt saneeritud ettevõtete näitajad paremad.

ANALYSE DES EINFLUSSANTEILES DER EXTENSIVEN UND INTENSIVEN FAKTOREN DER PRODUKTIONSÄNDERUNG

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Der Artikel befasst sich mit extensiven und intensiven Faktoren der Änderung der Produktionsmenge (Höhe), d.h. mit der Frage, ob die Änderungen des Outputs auf einem beliebigen Niveau der Wirtschaft (d.h. z.B. sowohl auf dem Niveau einer Firma, als auch auf dem Niveau der ganzen Gesellschaft) durch eine Quellenänderung erreicht wurde, wobei die Quellenqualität unverändert bleibt, oder dadurch, dass mehr oder weniger qualitative Quellen verwendet werden, wobei die Quellenmenge unverändert bleibt. In der Praxis wird das Produktionswachstum in den meisten Fällen durch eine Kombination der extensiven und intensiven Faktoren erreicht. In so einem Fall hat es einen Sinn, ihren Einfluss zu quantifizieren. In der heutigen Zeit werden die extensiven und intensiven Faktoren meistens auf dem Niveau der ganzen Wirtschaft mit Hilfe der Gleichung der Wachstumsbuchhaltung. Diese Gleichung leidet an einer Reihe von Mängeln (z.B. die Quantifizierung der extensiven und intensiven Faktoren ist nur für die Wachstumsphasen der Produktion, jedoch nicht mehr für den Rückgang möglich). Daher schlagen wir im Artikel eine neue Meßmethode der Extensität und Intensität mit Hilfe der sog. multiplikativen Produktionsfunktion vor. Bewusst sprachen wir daher ebenfalls im ersten Satz allgemein über die Produktionsänderung und nicht über das Produktionswachstum – es hat einen Sinn, den Einfluss der extensiven und intensiven Faktoren auf eine Änderung für eine beliebige Produktionsänderung und nicht nur für ihr Wachstum zu untersuchen.

Die von uns vorgeschlagene Lösung ist insoweit allgemein, dass sie den Einflussanteil der intensiven Faktoren sowohl für das wachsende, als auch für das rückgängige Produkt einschließlich der Stagnierung seiner Entwicklung äußern kann. Diese Lösung ermöglicht ferner, den Einfluss der Kompensation der extensiven und intensiven Faktoren (z.B. Analyse einer Situation, in der die intensiven Faktoren auf das Wachstum und die extensiven Faktoren auf den Rückgang der Produktion wirken) sowie einen konformen Einfluss beider Faktoren auf das Wachstum oder den Rückgang der Produktion zu äußern. Obwohl das Ergebnis der Analyse mit Hilfe der multiplikativen Produktionsfunktion informativ sehr reich ist, kommt es mit einem sehr bescheidenen Informationsinput in Form von Zeitreihen von zwei, drei oder wenigen absoluten Stromgrößen- oder Bestandsparametern oder direkt von ihrer dynamischen Charakteristik aus. Zum Beispiel auf dem Betriebsniveau kommen wir mit zwei Stromgrößenparametern aus, z.B. mit dem Gesamtertrag und Gesamtaufwand. Die volkswirtschaftlichen Applikationen verwenden für die Äußerung des Outputs gewöhnlich das BIP – das

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Bruttoinlandsprodukt in Festpreisen und auf der Seite der Inputs werden die Schlüsselproduktionsfaktoren meisten von der Arbeit L und dem Kapital K vertreten, was Bestandsparameter sind. Da diese Methode das Charakterisieren der Inputs durch einen zusammenfassenden Inputparameter erfordert, schreitet sie durch ihre Aggregation zum zusammenfassenden Input Faktor (SIF) fort. Neu an der gegebenen Lösung ist insbesondere die Nutzung der gewichteten multiplikativen Bindung anstelle der gewichteten additiven Aggregation, die der volkswirtschaftlichen Identität entspricht. Gerade von der gewichteten additiven Identität geht die Wachstumsbuchhaltung aus. Neben der oben angeführten Tatsache, dass der Einfluss der extensiven und intensiven Faktoren im Falle des Wachstums des Outputs analysieren kann, stellt einen Nachteil der Wachstumsbuchhaltung ferner diejenige Tatsache dar, dass die Gleichung selbst nur ein Näherungsausdruck ist, der ausreichend genau nur für einen sehr geringen Zuwachs gilt. Die Voraussetzungen, auf denen die Wachstumsbuchhaltung basiert, müssen in der heutigen turbulenten Zeit nicht einmal auf dem volkswirtschaftlichen Niveau erfüllt werden. Die gegebenen Voraussetzungen stellen einen der Gründe dar, warum die Wachstumsbuchhaltung auf anderen Niveaus, z.B. auf dem Niveau des Betriebsbereiches oder in anderen Wissenschaftsbereichen, nicht anwendbar ist.

Die größte praktische Anwendung unserer Lösung kann an einer klassischen volkswirtschaftlichen Aufgabe durchgeführt werden, wobei der Input Y das BIP in Festpreisen darstellt und die Inputs mittels der Bestandsparameter der Arbeit L und des Kapitals K ausgedrückt werden. Die Zeitreihen und die entsprechenden dynamischen Charakteristiken dieser Parameter sind auch exogene Parameter der Wachstumsbuchhaltung. Eine praktische Nutzung der Beziehung der Wachstumsbuchhaltung ist die Quantifizierung des Residualparameters, die durch das Tempo der zusammenfassenden Produktivität der Faktoren G(SF) dargestellt wird. Allgemein gilt:

$$G(Y) = G(SPF) + v_L.G(L) + (1- v_L).G(K) \quad (1)$$

$$G(SPF) = G(Y) – v_L.G(L) – (1- v_L).G(K) \quad (2)$$

Hierbei wurde der Ausdruck unter speziellen Anforderungen von der additiven volkswirtschaftlichen Identität im Rahmen der Erwägungen über die Entwicklung des sog. Potentialprodukts abgeleitet. Es kommen in ihm Waagen $v_{L,}$ die die Arbeitselastizität des Produktes darstellen, und v_K - die Kapitalelastizität des Produktes vor. Unter der Voraussetzung eines konstanten Ertrages aus dem Bereich ist die Summe dieser Waagen gleich 1.

$$v_L.+ v_K = 1 \quad (3)$$

Im Ausdruck (1) treten diese Waagen in einer gewichteten Aggregation der Wachstumsrate der Arbeit und des Kapitals auf. Die Voraussetzung der additiven Aggregation ist in der statischen Aufgabe schon daher nicht real, da man sich die Wirtschaft nicht ohne einen dieser Faktoren vorstellen kann, d.h. völlig ohne Arbeit oder ohne Kapital. Diese Faktoren sind zwar substituierbar, jedoch nicht absolut sondern relativ. Wahrscheinlich ist daher eine multiplikative Aggregation dieser Faktoren in der statischen Aufgabe, der eine Isoquante in Form von einer Hyperbel entspricht.

Das Wachstumstempo der zusammenfassenden Produktivität der Faktoren G(SPF), berechnet aus dem Ausdruck (2), ermöglicht unter dem bekannten Wachstumstempos des Produktes auch den Anteil des Einflusses der intensiven Faktoren auf die BIP-Entwicklung zu berechnen. Zuerst müssen wir jedoch beide Inputs, d.h. die Arbeit L und das Kapital K aggregieren. Die aggregierte Größe wird als der zusammenfassende Input der Faktoren SIF bezeichnet. Hierzu werden sowohl additive Aggregationsfunktionen, als auch multiplikative Funktionen angewandt, und zwar sowohl in einer statischen, als auch in einer dynamischen Aufgabe. Für die geeignetste Form der Aggregation halten wir die gewichtete geometrische Aggregation, die z.B. in Form von Cobb-Douglas mit einem technischen Fortschritt verwendet wurde.

$$Y = SPF \cdot L^{\alpha} \cdot K^{(1-\alpha)} \tag{4}$$

sodass

$$SIF = L^{\alpha} \cdot K^{(1-\alpha)} \tag{5}$$

woraus es sich ergibt

$$Y = SPF \cdot SIF \tag{6}$$

Im Hinblick auf die Eigenschaften der Indexe kann vom Ausdruck (6) einfach seine dynamische Form abgeleitet werden:

$$I(Y) = I(SIF) \cdot I(SPF) \tag{7}$$

Durch das Logarithmieren dieses Ausdruckes erhalten wir volkswirtschaftliche dynamische Parameter der Intensität und der Extensität. Die volkswirtschaftliche Form des dynamischen Parameters der Intensität lautet

$$i = \frac{\ln I(SPF)}{|\ln I(SPF)| + |\ln I(SIF)|} \tag{8}$$

Die volkswirtschaftliche Form des dynamischen Parameters der Extensität lautet

$$e = \frac{\ln I(SIF)}{|\ln I(SPF)| + |\ln I(SIF)|} \tag{9}$$

Die Berechnung des Einflussanteiles der intensiven und extensiven Faktoren mit Hilfe dieser Parameter hat gegenüber der Berechnung des Einflussanteiles auf Grund der Relation (3) zahlreiche Vorteile:

- sie ist nicht nur im Falle des Wachstums der Teilfaktoreneinflüsse, sondern auch ihrer Rückgänge und gegenseitigen Kompensationen, d.h. der Gegeneinflüsse anwendbar, die sowohl bis zu einer vollständigen Kompensation bis zum Nullwachstum des Produktes, sowohl zum BIP-Rückgang führen können,
- sie ist von keinem Fehler belastet, der durch die Vernachlässigung der multiplikativen Glieder der additiven Beziehung der Wachstumsraten verursacht wurde,
- sie ermöglicht eine sehr anschauliche Darstellung der Entwicklungstrajektorie im Raum (im Diagramm) der Änderungskoeffizienten I(SPF) und I(SIF), in dem gleichzeitig die Isoquanten (Höhenlinien) des BIP-Wachstumstempos

sowie der dynamischen Parameter der Intensität und Extensität dargestellt werden können.

Die dynamischen Parameter der Intensität und Extensität sind nicht nur bei der Messung der Intensität des Wirtschaftswachstums, sondern immer dann nutzbar, wenn wir feststellen müssen, wie sich an der Entwicklung eines Parameters die absolute Komponente, z.B. die Zeit und die quantitative Komponente, z.B. die Geschwindigkeit beteiligten. Eine interessante Anwendung haben die angeführten dynamischen Parameter bei der Bewertung der Entwicklungs- oder Innovationszyklen oder bei der Analyse der Nachfrage- oder Angebotskurven, wo sich die Nutzung der dynamischen Parameter der Intensität und der Extensität universaler zeigt, als die gewöhnlich angewandten Parameter der Elastizität, die keine normierte Werte hat. Die vorgelegte Meßmethode ist ebenfalls für eine tiefere Zerlegung in weitere quantitative Entwicklungsfaktoren perspektiv. Ihre Eigenschaften ermöglichen eine Konstruktion der zweckmäßigen multidimensionalen Graphen, die die Analyse erleichtern. Der Artikel analysiert ferner als ein Beispiel den Anteil der Einflüsse der dynamischen extensiven und intensiven Parameter auf das Wachstum oder den Rückgang des Bruttoinlandproduktes der Tschechischen Republik.

Zum Schluss dieser Zusammenfassung kann festgestellt werden, dass die zusammenfassende Produktivität der Faktoren eine der wichtigen Kennzahlen der ökonomischen Leistungsfähigkeit ist. Auf dem makroökonomischen Niveau kann sie als ein Verhältnis zwischen dem realen BIP und dem zusammenfassenden Input, der die Arbeit sowie das Kapital (bzw. weitere Inputs) umfasst, gemessen werden. Ihr Wachstum ist ein Ergebnis der quantitativen, d.h. intensiven Wachstumsfaktoren. Für den Zusammenschluss von zwei Faktoren (Arbeit und Kapital) zu einem zusammenfassenden Input verwendeten wir die gewichtete geometrische Aggregation. Der Beitrag der zusammenfassenden Produktivität der Faktoren zum wirtschaftlichen Wachstum ermöglicht, die Wachstumsbuchhaltung zu bestimmen, die ein methodologisches Instrument der Beitragsmessung der einzelnen Faktoren für das Wachstum des Realproduktes ist. Im Beitrag wiesen wir auf den Unterschied zwischen der exakten und der in den empirischen Analysen verwendeten Näherungsberechnung des Wachstumstempos der Produktivität der Faktoren mit Hilfe der Wachstumsbuchhaltung hin. Für die Ermittlung des Anteiles der intensiven (d.h. qualitativen) und extensiven Faktoren am Wachstum des realen BIP verwendeten wir den dynamischen Parameter der Intensität und der Extensität. Diese Parameter ermöglichen, ihren Anteil sowohl bei der Gegenwirkung der Faktoren, als auch beim Rückgang des realen BIP zu messen, sie haben eine universale Anwendbarkeit und eine gute Zeit- sowie Raumvergleichbarkeit. Dies ermöglicht die ökonomische Analyse um eine weitere Ansicht zu erweitern.

ETTEVÕTLUSTOETUSED EESTIS: MILLIST ETTEVÕTET NEED SOOSIVAD?

Maksim Mõttus, Oliver Lukason
Tartu Ülikool

Sissejuhatus

Seoses Euroopa Liiduga (EL) liitumisega on Ida-Euroopa riikidele ELi poolt antud suurel hulgal (tagastamatuid) toetusi erinevate eluvaldkondade arendamiseks. Oluline osa neist toetustest on olnud suunatud ettevõtete arendamisesse, mistõttu on ka välja töötatud suur hulk erinevaid ettevõtete rahalise toetamise meetmeid. Samas pole siiani avaldatud (teadus)kirjutiste põhjal võimalik öelda, millised ettevõtted on erinevate meetmete poolt finantseeritavate tegevuste ja ettevõtetele seatud piirangute tõttu soositud ning millised mitte. Eelnev ongi motiveerinud vastava artikli kirjutamist. Artiklis antakse ülevaade kõigist Eesti ettevõtlustoetustest, mis on EL fondide poolt rahastatud ja mida siseriiklikult jaotatakse, saamaks vastust küsimusele, milline ettevõte on Eestis ettevõtlustoetuste saamiseks soodsas seisus.

Teemakohane kirjandus ja ettevõtlusteotused Eestis

Riigiabi käsitlevat teoreetilist kirjandust ja praktilisi uuringuid on maailmas teostatud palju. Uuringutes puudub siiani ühtne seisukoht, kas riigiabi on ainult positiivse mõjuga ning kas see suudab täita sellele seatud eesmärke. Riigiabi rahalistest meetmetest on tuntud tagastamatu abi, laenud, laenugarantiid ning maksusoodustused. Erinevate riikide toetuste süsteemid võivad olla vägagi erinevad, tulenevalt peamiselt sellest, et nende ülesehituse tinginud riiklikud strateegiad on väga erinevad.

Programmperioodil 2007-2013 kasutatakse Eestis ettevõtete toetamiseks erinevate EL programmide vahendeid, mis tulenevad peamiselt ELi struktuuri-, regionaal-, ühtsest põllumajandus- ja kalanduspoliitikast. Vastavaid poliitikaid Eestis elluviivad institutsioonid on peamiselt Majandus- ja Kommunikatsiooniministeerium ning Põllumajandusministeerium, rakendusüksusteks vastavalt Ettevõtluse Arendamise Sihtasutus (EAS) ning Põllumajanduse Registrite ja Informatsiooni Amet (PRIA).

Kasutada olevad andmed

Ettevõtlustoetusi puudutava analüüsi läbiviimiseks koguti info kõigi programmperioodi toetuste kohta strateegilistest dokumentidest ning rakendusasutuste ja rakendusüksuste kodulehtedelt. Peamiselt pakuvad Eestis ettevõtetele toetusi EAS ning PRIA, mistõttu on analüüsis piirdutud ka nende poolt rakendatavate meetmetega. Samas on muude rakendusüksuste ettevõtetele suunatud meetmeid Eestis ka ainult üksikuid. Seejärel tutvuti kõigi meetmete määrustega, mille tulemusel koostati kõigi meetmete kohta nimekiri kajastades erinevaid karakteristikuid. Alljärgnevalt on kajastatud ainult need karakteristikuid, mis on vajalikud tabelis 1 toodud informatsiooni mõistmiseks.

1) Toetatavate tegevuste liigid (vastavalt EASi toetusvõimaluste andmebaasile, „Jah“ – 1 / “Ei“ – 0):
   a) Investeeringud - kulutused põhivara soetamiseks on abikõlblikud.
   b) Arendustegevus - kulutused innovatsioonile on abikõlblikud.
   c) Uuringud - uuringute teenuste sisseostmine on abikõlblik.
   d) Koolitus - koolitusteenuste sisseostmine on abikõlblik.
   e) Konsultatsioon - nõustamisteenuste sisseostmine on abikõlblik.
2) Toetavate tegevuste liigid (selleks otstarbeks koostatud klassifikatsiooni alusel, st. väärtus „1“ omistatakse sellele toetatavale tegevusele, millele meede peamiselt suunatud on)
   a) Põhivara
   b) Kulud
3) Taotlejatele esitatavate piirangute liigid („Jah“ – 1 / „Ei“ – 0):
   a) Vanus
   b) Tegevusala
   c) Omanikud
   d) Mineviku finantsnäitajad
   e) Tuleviku finantsnäitajad
   f) Asukoht
4) Toetusmeetme piirangud taotlemisele:
   a) Minimaalne toetus – summa või vahemik eurodes.
   b) Maksimaalne toetus – summa või vahemik eurodes.
   c) Toetusmäär – protsentides koguinvesteeringust /-kulust või vastav vahemik.
   d) Meetme eelarve – toetuse kogueelarve kokku miljonites eurodes.
   e) Kättesaadavuse algusaeg – meetme avanemine taotlemiseks või vastava määruse esimese redaktsiooni jõustumise kuupäev.
   f) Kättesaadavuse lõpp – meetme sulgemise kuupäev.

Taotlemine viis – „Jooksev“ (avatud taotlemiseks pidevalt – „C“) / “Voorudena“ (avatud taotlusvoorudena – „R“)

Kokku tuvastati perioodi 2007-2013 kohta 36 meedet, neist pooled EASi ning pooled PRIA omad.

Analüüsi tulemused

Kõigi Eesti ettevõtlustoetuste analüüs näitab, et toetuste koguarvust on ligikaudu kaks kolmandikku suunitlusega investeeringutele ja arendustegevusele, kokkuvõttes põhivara investeeringutele. Erinevate kulude rahastamine on eelnevast tulenevalt oluliselt vähemlevinud. Kahe rakendusüksuse lõikes on investeeringute põhisus oluliselt suurem PRIA meetmete puhul ning vastavalt oluliselt madalam EASi meetmete korral.

Tabel 1. Rahalist toetust pakkuvate meetmete ülevaade rakendusüksuste lõikes ja kokku

Toetusmäär	33	92%	99%	15	83%	98%	18	100%	100%
Maks. toetus (EUR)	36	100%	100%	18	100%	100%	18	100%	100%
Min. toetus (EUR)	11	31%	23%	10	56%	65%	1	6%	3%
Asukoht	8	22%	50%	0	0%	0%	8	44%	75%
Tuleviku finantsandmed	9	25%	22%	3	17%	7%	6	33%	30%
Mineviku finantsandmed	17	47%	54%	6	33%	13%	11	61%	74%
Omanikud	19	53%	43%	16	89%	79%	3	17%	25%
Tegevusala	34	94%	82%	17	94%	77%	17	94%	84%
Vanus	13	36%	48%	3	17%	7%	10	56%	68%
Kulud	12	33%	18%	10	56%	52%	2	11%	2%
Põhivara	24	67%	82%	8	44%	48%	16	89%	98%
Konsultatsioon	11	31%	13%	10	56%	38%	1	6%	1%
Koolitus	6	17%	5%	5	28%	5%	1	6%	5%
Uuringud	5	14%	16%	4	22%	46%	1	6%	1%
Arendustegevus	22	61%	69%	11	61%	64%	11	61%	71%
Investeeringud	25	69%	89%	9	50%	71%	16	89%	98%
	Toetusmeetmete arv, mis vastavat tegevust toetavad või omavad konkreetset piirangut	Vastav osakaal	Vastav osakaal kui võtta arvesse meetmete eelarveid	EAS toetusmeetmete arv, mis vastavat tegevust toetavad või omavad konkreetset piirangut	Vastav EAS osakaal	Vastav EAS osakaal kui võtta arvesse meetmete eelarveid	PRIA toetusmeetmete arv, mis vastavat tegevust toetavad või omavad konkreetset piirangut	Vastav PRIA osakaal	Vastav PRIA osakaal kui võtta arvesse meetmete eelarveid

Taotlejale ja taotlusele seatud piirangute lõikes on varieeruvus päris suur. Kõige vähem on seatud piiranguid tuleviku finantsandmete ning minimaalse toetussumma osas, mõlemal juhul ligikaudu veerandil juhul toetuste kogueelarvest. Teisalt on peaaegu kõigi meetmete puhul tegemist maksimaalse toetuse ning toetusmäära piirangutega, kuid küllaltki kõrge on ka tegevusvaldkonna piirangu osakaal. Vanusele, omanikele, mineviku finantsandmetele ning asukohale on meetmete kogueelarvest piiranguid umbes pooltel juhtudel.

Kahe rakendusüksuse meetmete lõikes varieerub piirangute olemasolu märkimisväärselt. Kuueteistkümnest vaadeldud muutujast kümne korral näitab Cramer'i V test nivool 0,10 EASi ja PRIA lõikes statistiliselt olulisi erinevusi. Kui vaadelda meetmeid selle alusel, kas need on suunatud põhivara investeeringute tegemiseks või kulude hüvitamiseks, siis viimatinimetatud meetmete puhul on oluliselt vähem piiranguid ning kahe vastava meetmetegrupi puhul on viis piirangut üheksast Cramer'i V testi alusel nivool 0,10 statistiliselt oluliselt erinevad.

SOTSIAALKAPITALI DÜNAAMIKA JA DETERMINANDID: EL VANADE JA UUTE LIIKMESRIIKIDE NING NENDE NAABERRIIKIDE VÕRDLUS

Eve Parts[1]
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Sissejuhatus ja teoreetiline raamistik

Ülemaailmne majanduskriis on mõjutanud riike juba mitu aastat ja sundinud neid leidma lahendusi tekkinud sotsiaalsetele ja majanduslikele probleemidele nagu majanduskasvu aeglustumine ja riigivõla kasv; töötuse, vaesuse ja ebakindluse suurenemine jne. On ilmnenud, et traditsioonilised majanduspoliitilised meetmed üksi ei anna koheseid soovitud tulemusi, mis on muutnud inimesed rahulolematuks ja pessimistlikuks olukorra paranemise suhtes. Sellises olukorras on oluline roll alternatiivsetel, pehmematel meetmetel inimeste toimetuleku parandamiseks ja seeläbi ka majanduskasvu taastumise soodustamiseks. Üheks olukorra parandamise allikaks võiks olla sotsiaalkapitali rolli suurendamine. Sotsiaalkapitali saab vaadata nii riigi tasandil majanduskasvu soodustava tegurina, mis toimib läbi tehingukulude vähendamise ja koostöö tänu üldisele ja institutsionaalsele usaldusele ning tihedamatele ärivõrgustikele, kui ka indiviidi tasandil toimetulekut toetava tegurina, mis tõstab esile mitteformaalsed sotsiaalsed- ja peresuhted ning vabatahtliku kogukondliku tegevuse olukorras, kus materiaalsed tulud on vähenenud ning turu kaudu kõike vajalikku hankida pole võimalik. Selles kontekstis võib sotsiaalkapitali üldistatult käsitleda ühiskonda kooshoidva „liimina“, mis võimaldab raskete aegadega toime tulla nii indiviidide, kogukonna kui riigi tasandil. Sotsiaalkapitali, eriti üldise ja institutsionaalse usalduse tekkimise ja levimise soodustamine võimaldab vähendada kriisiga seonduvaid sotsiaalseid ja poliitilise riske ning aitab kodanikke veenda, et kriisimeetmete pikaajalised positiivsed mõjud jätkusuutliku majanduskasvu taastamisel kaaluvad üles lühiperioodil ilmnevad ebamugavused, mis seostuvad riigieelarve kärbete ja sotsiaalsete garantiide ajutise vähenemisega.

Teisalt on kirjanduse põhjal teada, et kriisi ajal kaldub sotsiaalkapitali tase ühiskonnas sageli vähenema. Seejuures sõltub riikide kogemus ka nende üldisest arengutasemest ja ajaloolisest taustast – statistika näitab, et Euroopa idapoolsetes liikmesriikides ja naabermaades (eriti kommunistliku režiimi taustaga riikides) on sotsiaalkapitali tase madalam kui Lääne-Euroopas, kujutades endast olulist takistust majanduskasvu taastumisel ja inimeste igapäevase toimetuleku tagamisel. Siit tulenevalt on oluline uurida, kuidas täpsemalt on sotsiaalkapitali tase Euroopas viimase kriisi käigus muutunud ja millised tegurid on neid muutusi enim mõjutanud.

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Käesolev artikkel on valminud Euroopa Komisjoni 7. Raamprogrammi projekti nr. 266834 (SEARCH) toetusel.

Käesoleva uurimuse eesmärgiks on välja selgitada sotsiaalkapital taseme muutused Euroopas perioodil 1990-2008 ning hinnata sotsiaalkapitali taset mõjutavaid tegureid võrdlevalt kolmes riikide grupis: EL-i vanades liikmesriikides, uutes liikmesriikides ning idapoolsetes naaberriikides. Kuna kahes viimases grupis on paljud riigid kommunistliku ajalooga, siis uuritakse eraldi ka selle režiimi võimalikku mõju sotsiaalkapitali formeerumisele. Analüüsi tulemused peaksid andma olulist infot selle kohta, milliste poliitikate rakendamine on mõttekas ja vajalik sotsiaalkapitali kui olulise arenguteguri võimaluste paremaks ärakasutamiseks majanduskriisist taastumise perioodil.

Empiirilised tulemused

Artiklis läbiviidud empiiriline analüüs põhineb Euroopa Väärtushinnangute Uuringu (EVS – *European Values Study*) indiviidi tasandi andmetel. Sotsiaalkapitali kui mitmedimensioonilise nähtuse mõõtmiseks kasutati kinnitavat faktoranalüüsi, mille abil moodustati andmebaasist teooria põhjal väljavalitud 12 algnäitajast neli sotsiaalkapitali faktorit: üldine usaldus, institutsionaalne usaldus, formaalsed võrgustikud ja sotsiaalsete normide järgimine. Edasiseks analüüsiks arvutati indiviidi tasandi faktorite keskmistena välja sotsiaalkapitali komponentide hinnangud riigi tasandil. Muutusi sotsiaalkapitali tasemes perioodil 1990-2008 vaadeldi võrdlevalt kahes riikide grupis, mille moodustasid 14 Lääne-Euroopa (WE – *Western Europe*) riiki ning 10 EL-i uut liikmesriiki Ida-Euroopast (NMS – *new member states*). Tulemused kinnitasid oletust, et Lääne-Euroopas on sotsiaalkapitali tase kõrgem kui Ida-Euroopas, kusjuures perioodil 1990-2008 on lõhe nende kahe riikide grupi vahel suurenenud. Kui kaasata 2008.a. andmetel sotsiaalkapitali tasemete võrdlusesse ka EL-i naaberriigid (NC – *neighbouring countries*), mis on madalama arengutasemega ning paljudel juhtudel samuti kommunistliku režiimi taustaga nagu Ida-Euroopa riigid, siis ilmnevad mitmed huvitavad tendentsid (vt. tabel 1).

Tabel 1. Sotsiaalkapitali komponentide faktorskoorid riikide gruppide lõikes

Riikide grupp	Aasta	Üldine usaldus	Institutsionaalne usaldus	Formaalsed võrgustikud	Sotsiaalsed normid
WE	1990	0.247	0.068	0.094	0.016
	2008	0.261	0.157	0.199	0.098
NMS	1990	-0.178	-0.090	-0.066	-0.003
	2008	-0.244	-0.252	-0.194	-0.130
NC	2008	-0.212*	0.055	-0.209	0.036

* Kui jätta NC valimist välja Valgevene ja Aserbaidžan kui erandlikult kõrge üldise usalduse tasemega rigid, siis on NC riikide keskmine üldine usaldus -0.285.
Allikas: autori arvutused EVS põhjal.

Esiteks, üldise usalduse ja formaalsete võrgustike puhul kehtib eeldatud seaduspära, mille kohaselt kõrgema tulutasemega NMC-des on rohkem sotsiaalkapitali kui vaesemates naaberriikides. Võrreldes aga institutsionaalse usalduse ja sotsiaalsete

normide näitajaid, on tulemus vastupidine – need sotsiaalkapitali komponendid on NC-des suurema väärtusega kui uutes liikmesriikides. Ilmselt tuleneb see kommunistlikust pärandist ja inimeste väiksemast julgusest valitsuselt ühiskonda edasiviivaid reforme nõuda – ollakse (vähemalt avalikult) pigem oma tegelikku arvamust ning rahulolematust enda teada hoidvad. Küll aga võib Ida-Euroopa uute liikmesriikide näitel oletada, et aja jooksul muutuvad inimesed julgemaks ja nõudlikumaks, mis võib paraku tähendada institutsionaalse usalduse (ajutist) vähenemist EL-i naaberriikides. Sellele tendentsile vastuseismiseks on äärmiselt oluline tagada riiklike institutsioonide toimimise efektiivsus ja usaldusväärsus, mis on aga keeruline arvestades, et kriisi tagajärgedega toimetulekuks vajalikud reformid on sageli valulikud.

Tabel 2. Sotsiaalkapitali mõjurid: regressioonanalüüsi tulemused (standardiseeritud regressioonikoefitsiendid)

Sõltumatud muutujad	Sõltuv muutuja			
	Üldine usaldus	Institutsionaalne usaldus	Formaalsed võrgustikud	Sotsiaalsed normid
Sugu	0.04***	0.01	-0.02**	0.05***
Vanus	0.08***	0.02***	0.00	0.16***
Sissetulek	0.08***	0.04***	0.08***	0.01
Haridus	0.12***	0.02**	0.11***	-0.01
Hõive staatus	-0.03***	-0.01	-0.01	0.01**
Lähisuhe	0.00	-0.01**	0.02***	-0.05***
Lapsed	0.00	0.03***	0.03***	0.04***
Elukoha suurus	0.00	-0.03***	-0.06***	-0.03***
Individualism	-0.08***	-0.01*	-0.07***	0.01
Demokraatia	0.12***	0.49***	0.04***	0.04***
Religioossus	-0.03***	0.03***	0.03***	0.09***
NMS	-0.02	-0.08***	-0.06***	-0.20***
NC	-0.05*	0.06**	-0.07**	-0.14***
WE	0.13***	0.00	0.04	-0.14***
F-Statistic	171.59***	481.63***	84.49***	99.64***
Durbin-Watson	1.53	1.56	1.35	1.39
Adjusted R-square	0.11	0.26	0.06	0.07

Märkused: N=18829. *** seos on statistiliselt oluline nivool 0.01, ** oluline nivool 0.05, * oluline nivool 0.10.

Empiirilise analüüsi teiseks uurimisküsimuseks oli sotsiaalkapitali mõjurite väljeselgitamine, milleks viidi läbi regressioonanalüüs EVS-i kõige värskemate, 2008. aasta andmetega. Sellesse analüüsietappi oli kaasatud 20 WE, 10 NMS ja 15

NC riiki. Teooriast lähtuvalt vaadeldi kahte sotsiaalkapitali mõjurite gruppi indiviidi tasandil: 1) sotsiaal-demograafilised tegurid nagu vanus, sugu, haridus, sissetulek, hõive ja kooselu staatus, laste olemasolu ja elukoha suurus, ning 2) kultuurilised ja psühholoogilised tegurid nagu individualism, rahulolu demokraatia arengutasemega ning religioossus. Regressioonanalüüsi tulemused on toodud tabelis 2.

Tabelist 2 on näha, et olulisimad sotsiaalkapitali mõjurid on haridus ja rahulolu demokraatiaga. Seega on sotsiaalkapitali suurendamiseks olulised investeeringud haridussüsteemi ja ühiskonna üldine demokratiseerimine. Väiksemat positiivset seost sotsiaalkapitaliga omasid ka vanus, sissetulek ja laste olemasolu, samas kui individualism ning elamine suuremas linnas või asumis pigem pärsivad sotsiaalkapitali teket. Viimatinimetatud tegurite puhul on raske välja tuua konkreetseid poliitikasoovitusi – üldise majandusarengu soodustamine suurendab ka sissetulekuid, kuid reeglina kaasneb sellega individualismi kasv, väiksem laste arv perekonnas ning inimeste koondumine suurematesse linnadesse, kus on tasuvamad töökohad. Positiivsema poole pealt võib välja tuua, et rahvastiku vananemine arenenud riikides peaks sotsiaalkapitali loomisele kaasa aitama.

Tabel 3. Riikide gruppide erinevused

	Institutsionaalne usaldus	Formaalsed võrgustikud	Sotsiaalsed normid
Vanus	WE + NMS + NC – (ns)	WE + NMS – (ns) NC -	
Sissetulek	WE + NMS + NC -		WE + NMS - NC -
Haridus	WE + NMS - NC (ns)		WE + NMS + NC -
Individualism	WE - NMS – (ns) NC +		WE - NMS + (ns) NC +

"+" positiivne regressioonikoefitsient, "-" negatiivne regressioonikoefitsient, "ns" ebaoluline seos.
Allikas: autori üldistused eraldi riikide gruppides läbiviidud regressioonanalüüsi põhjal.

Kuna tervikvalimiga läbiviidud analüüsis osutusid erinevaid riikide gruppe tähistavad fiktiivsed muutujad mitmel juhul statistiliselt oluliseks, viidi regressioonanalüüs läbi ka eraldi iga grupi andmetega. Ainsaks sotsiaalkapitali komponendiks, mille mõjurid on kõigis riikide gruppides sarnased (st samasuunalised, ehk kõik regressioonikoefitsiendid on sama märgiga), osutus üldine usaldus. Kõigi ülejäänud komponentide puhul ilmnes ühe või enama mõjuri osas erinevusi. Peamised erinevused tulemustes võtab kokku tabel 3. Kui formaalsete

võrgustike puhul oli erinev vaid vanuse mõju (positiivne WE-s ja negatiivne NC-s), siis institutsionaalse usalduse ja sotsiaalsete normide puhul oli erinevusi märksa rohkem. Institutsionaalse usalduse mõjuritest olid eeldatule vastupidised vanuse ja sissetuleku negatiivne mõju NC-s, hariduse negatiivne mõju NMS-s ning individualismi positiivne mõju NC-s. Sotsiaalsete normide puhul oli tavapärasele vastupidine sissetuleku positiivne mõju WE-s, hariduse negatiivne mõju NC-s ning individualismi positiivne mõju nii NMS kui NC riikides.

Kokkuvõte

Kokkuvõtteks võib öelda, et sotsiaalkapitali taseme erinevused vaadeldud riikide gruppides vastavalt üldjoontes teoorias eeldatule, mille kohaselt kasvab sotsiaalkapitali tase koos riigi üldise arengutasemega. Erandiks osutusid institutsionaalne usaldus ja sotsiaalsete normide järgimine, mille suhteliselt kõrge taseme põhjuseks majanduslikult ja ühiskondlikult vähemarenenud EL-i naabermaades võib pidada nende varasema kommunistliku režiimi pärandit. Sotsiaalkapitali mõjureid uurides selgus, et varasema kirjanduse põhjal üldistatud seaduspärad kehtivad vaid Lääne-Euroopa riikides ning EL-i naabermaades on seosed pigem vastupidised. Ida-Euroopa riigid, sh. Eesti jäävad nende kahe äärmuse vahele: mõnes aspektis on meil sotsiaalkapitali tekkimisega seotud protsessid sarnased Lääne-Euroopale, kuid teatud valdkondades ilmnevad veel kommunistliku mineviku järelmõjud. Küll aga võib üldistada, et parimad meetmed sotsiaalkapitali sihipäraseks tugevdamiseks on kõikjal seotud hariduse ja demokraatia edendamisega.

KAUDSETE MAKSUDE DOMINANT EESTI RIIGIEELARVE TULUDES

Olev Raju
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Eesti riigieelarve väga halb täituvus kriisiperioodil tõstis teravalt päevakorda küsimuse oprtimaalsest maksukoormusest ja maksude srtuktuurist. Käesoleva kirjutise raames vaadeldakse tarbimismaksude suurt osakaalu Eesti riigieelarve laekumistes ja kaudsete maksude optimaalse taseme probleeme.

Eesti maksukoormus on alates Eesti astumisest EL olnud vahemikus 33,7-36,3%, mis oli aastaid madalam EL keskmisest, kuid nüüd on ligikaudu keskmine (2010 vastavalt 34,2% ja 35,8%), seda nii Eesti maksukoormuse tõusu kui EL keskmise maksukoormuse alanemise tõttu

Majanduskriisi tingimustes aktualiseerus maksude struktuuri küsimus. Tabelis 1 on toodud Eesti riigieelarvesse laekunud maksud alates 2005 aastast, s. o. Eesti EL astumisest. On selge, et kaudsete maksude alla lähevad neist VAT, aktsiisid ja tollimaks. Kuid kaudsete maksude tunnuseid on ka hasartmängumaksul. Sellisel kujul, kui on Eestis kehtestatud sotsiaalmaks, teda meile teadaolevatel andmetel kuskil mujal ei eksisteeri. Maksu tasub tööandja; kuid selle välja arvutamise aluseks on töövõtjale makstav summa. Kuna pole selge, kas sellisel kujul on sotsiaalmaks otsene või kaudne maks, siis liigitavad autorid teda meelevaldselt. Eurostat liigitab Eesti selle maksu tööjõumaksude (labor tax) hulka, lugedes teda seega ressursimaksuks. (Taxation. http://epp.eurostat.ec.europa.eu/portal/page?-pageid/136748), kuid ka see pole päris täpne, kuna sotsiaalmaksu laekumised on ette ära suunatud kindlateks sotsiaalkuludeks.'Ilmselt on mõttekas välja tuua kaudsete maksude osakaal kahes eri variandis, koos sotsiaalmaksuga ja ilma selleta. Esimesel juhul on kaudsete maksude osakaal pärast Eesti astumist EL kõikunud vahemikus 75,3 - 87,8% riigieelarve tuludest, teisel juhul vahemikus 41,1 - 53,6%. Esimese metoodika järgi on tegu selgelt suurima kaudsete maksude osakaaluga EL liikmesmaade hulgas; ka teise metoodikaga saadud tulemus ületab selgelt EL keskmist.

Tarbimismaksude osakaalu leidmisel kerkib jälle küsimus sotsiaalmaksust.. Kindlasti kuuluvad tarbimismaksude hulka VAT ja aktsiisid. Ka tollimaks alkoholilt, mööblilt, lihalt jne on pigem tarbimismaks. Ilmselt on õige tarbimismaksude hulka liigitada Eestis kehtestatud kujul ka hasartmängumaks. Sellise käsitluse juures kerkib huvitav paradoks- kaudsed maksud ja tarbimismaksud langevad kokku. Mitte soovides diskuteerida sellise käsitluse põhjendatuse üle, konstateerime, et mistahes lähenemise korral tarbimismaksudele on nende osakaal Eesti riigieelarve tuludes suur.

Arvud näitavad ka sotsiaalmaksu kasvavat dominanti Eesti riigieelarve laekumistes 34,2%lt 2004a. 44,4%ni 2008a. 2008 aastal alanud majanduskriis aga külmutas seoses tööpuuduse suure kasvuga 2009a. palgana välja makstavad summad, mis viis sotsiaalmaksu laekumiste vähenemiseni. Majapidamiste tulude kasvu lõppemine -

tihti isegi vähenemine - viisid majapidamiste suure laenukoormuse olukorras aga käibemaksu ja aktsiiside laekumise vähenemisele. See viis Eesti 2008-2010 aasta riigieelarved suure löögi alla. lmselt on tarbimismaksudele rajatud eelarve tuludel suur elastsus perioodidel, kus sissetulekud ja tarbimine suurenevad kiiresti, aga sellisel süsteemil on nõrk ujuvus (buoyancy).

Probleemi lahendamiseks kärpis valitsus kulusid ja tõstis kriisi haripunktil makse. Sellele vaatamata vähenesid Eesti riigieelarve maksutulud kriisiaastail kokku pea 11% Maksukoormuse kasv 31.4%lt 34,2%ni aastail 2000-2010 on oluliselt aktualiseerinud küsimust optimaalsest maksude tasemest. Püüame alljärgnevalt konstrueerida mudelit Eestis dominantsete kaudsete maksude optimumi leidmiseks.

Tabel 1. Maksude laekumine Eesti riigieelarvesse 2005-2010 (2005-2010 miljonit krooni, 2011-2012 miljonit eurot)

	2005	2006	2007	2008	2009	2010	2011	2012
Maksud kokku	53831	55208	67718	70396	63780	63299	4342	4775
Isiku tulumaks	10911	3846	4786	4328	2419	3000	227	266
Ettevõtte tulumaks	2365	3123	4083	4166	4010	3032	201	252
Käibemaks	14021	18645	22304	20548	18809	19531	1343	1494
Aktsiisid	6424	7030	8195	8971	9818	10425	717	776
s.h. tubakaaktsiis	1205	1208	1529	2519	2088	1794	145	158
alkoholiaktsiis	1838	2089	2314	2434	2590	2585	179	195
kütiseaktsiis	3363	3728	4353	4697	4870	4870	361	390
Hasartmängumaks	292	354	467	484	278	323	19	20
Tollimaks	347	401	549	508	307	373	29	29
Sotsiaalmaks	18392	21764	27268	31299	28084	26562	1801	1933
Muud maksud	1079	45	66	92	554	62	5	15

Allikas. Autori arvutused Rahandusministeeriumi koduleheküIje alusel. http://www.fin.ee/

Mudeli konstrueerimisel lähtume välismõjude puudumisest, isokvandi ja samakasulikkuse kõvera klassikalisest kujust ning Pareto-optimumi saabumisele punktis, kus valitsusele laekuva tulu kasv ja ostjõu ümberjaotuse kõver kohtub paušaalmaksude omaga. Seega me sisuliselt otsime varianti, mille puhul valitsuse sissetulekute laekumise kasv ja sellest tulenev sotsiaalne heaolu ei oleks väiksemad majapidamiste kaotusest. Teiste sõnadega, kui võrrandi (1) vasak pool ületab parema, siis on ühiskonna kogu sotsiaalne heaolu kasvanud.

Asjale valemi kuju andes võib väita, et me püüame valida maksuvektori t nii, et maksimeerida sotsiaalset heaolu V(q) tähistades subjektide kogutulu kaudsetest maksudest R(t), saame

$$R(t) = t \bullet X(q) \geq \vec{R}, \qquad (1)$$

kus X(q) on kogunõudluse vector ja $\vec{R}$ on vajalik maksutulu.Kui nüüd lugeda, et pärast maksude kehtestamist kogust q pakutakse hinnaga t, tarbija aga maksab tema eest hinna (p+t) siis tähistades kogusele q vastava majapidamise heaolu on v(q) ning majapidamise nõudluse x(q) saamegi valemi (1). Rõhutame veelkord, et V(q) on sotsiaalse heaolu kasv maksude kasvust.

Püstitatud ülesanne laheneb lihtsalt kui kasutada Ramsey reeglit optimaalsete maksude kohta ja majandusteaduses levinud Lagrange maksimumi leidmise võtet. Seega me maksimeerime V + λR kus λ on Lagrange kordaja, mis antud juhul tähistab mitte mõne konkreetse erasektori poolt pakutava kauba, vaid valitsuse tulude kasvust tuleneva sotsiaalse heaolu piirkasulikkust. Seega võime kirjutada

$$\frac{\partial V}{\partial t_i} + \lambda \frac{\partial R}{\partial t_i} = 0. \qquad (2)$$

Kui nüüd asendada

$$\partial V / \partial t_i = -\sum_h \beta^h x_i^h \text{ ja } \partial R / \partial t_i = X_i + t \cdot \partial X / \partial t_i$$

ning kasutada Slutsky kompenseeritud nõudluskõverat ja leida tuletis, saame:

$$\frac{\sum_k t_k \sum_h s_{ik}^h}{X_i} = -\sigma_i$$

$$\sigma_i = 1 - \sum_h \frac{x_i^h}{X_i} \frac{b^h}{\bar{b}}$$

Kus S_{ik}^h on Slutsky kompenseeritud nõudluskõvera tuletis majapidamisele h (on säilitatud maksude tõstmise eelne kasulikkusetase) ja σ_i on negatiivne, kuna majapidamise netotulude sotsiaalse piirkasulikkuse b^h (kus „neto" tähendab kohanemist sotsiaalse piirkasulikkusega β^h marginaalse kalduvuse tõttu tasuda maksud lisasissetulekutest; ning b on keskmine b^h) ja hüvise i tarbimise vahel majapidamise h poolt (x^h_i) valitseb kovariantsus. Niisiis, σ_i on seda kõrgem, mida rohkem hüvist tarbivad need, kelle sissetuleku sotsiaalne piirkasulikkus on madal.

Kuna eeltoodud valemid (1) ja (2) võtavad arvesse maksude ja sotsiaalse heaolu vastandliku seose kõige olulisemaid aspekte, on kaudsete maksude efektiivsuse sotsiaalne aspekt sellega küllaltki hästi kirjeldatav. Kuid nii siintoodud kui ka spetsialistide poolt varem pakutud valemid (Ahmed; Stern, 1989) on praktikas kasutatavad vaid eeldusel, et meil õnnestub matemaatiliselt kirjeldada majapidamiste sotsiaalse heaolu funktsioon; millest siis on võimalik leida tuletis. Praktikas osutub

selle funktsiooni piisava täpsusega leidmine keeruliseks, s.t. kerkivad needsamad raskused mis Hicksi võtte kasutamisel asendus- ja sissetulekuefekti lahutamisel.

Järeldused

1. Kaudsete ja tarbimismaksude osakaalu leidmine kogu maksukoormuses on keeruline, kuna maailmas puudub tunnustatud metoodika. Ka on mitmetel Eestis kasutatavatel maksudel korraga nii kaudsete kui otseste maksude tunnuseid. Samuti ei ole selge, mida ikkagi lugeda tarbimismaksuks.

2. Mistahes metoodika kasutamisel kaudsete ja otseste maksude määratlemisel jäävad Eesti riigieelarve laekumistes domineerima kaudsed maksud.

3. Eesti riigieelarve tulude struktuur erineb oluliselt EL enamiku liikmesriikide omast. Riigieelarve suurim ja kasvava osakaaluga tuluallikas on omapärase ülesehitusega sotsiaalmaks, mis on raskesti liigitatav nii otseste, kaudsete kui tööjõumaksude alla. Väga suure tarbimismaksude osakaalu tõttu on Eesti maksusüsteemi ujuvus nõrk. Majanduslanguse perioodil oli Eesti riigieelarve kergesti haavatav. Vaatamata maksukoormuse tõusule 31,4%lt 34,2%le aastail 2008-2010 vähenesid riigieelarve maksutulud pea 11%.

4. Riigieelarve väga halb täitumine 2008 ja eriti 2009 aastal, mis sundis valitsust tegema kuni 10% ulatuvaid eelarvekärpeid ja tõstma makse, on teravalt tõstatanud küsimuse optimaalsest maksukoormusest Eestis. Lähtudes Slutski kompenseeritud nõudluskõvera põhimõttest ja Ramsey maksude optimumi teooriast võib kaudsete maksude optimaalse tasemena vaadelda punkti, kus majapidamiste heaolu vähenemise kõver ja ühiskonna sotsiaalse heaolu kasvu kõver maksude tõstmisest lõikuvad. Praktikas on seda punkti väga raske leida.

AVALIKU SEKTORI INNOVATSIOONID JA NÕUDLUSPOOLSED INNOVATSIOONIPOLIITIKAD

Tõnu Roolaht[1]
Tartu Ülikool

Teadmistepõhine ühiskond rajab oma arengu innovaatilistele lahenditele. Harilikult pühendatakse selliste uudsete turulahendite pakkumisel enam tähelepanu erasektori algatustele. Kuid kaasaja maailmas on ressursid sageli piiratud, samal ajal kui ootused avaliku sektori pakutavate teenuste kvaliteedile ja juurdepääsetavusele üha kasvavad. Kogukonnad puutuvad järjest enam kokku selliste probleemidega, mida tavapäraste poliitikameetmetega ei õnnestu edukalt lahendada. Need tendentsid loovad avalikus sektoris silmatorkava vajaduse uute innovaatiliste protsesside, lahendite ja strateegiate järele.

Mõned neist avaliku sektori innovatsioonidest on pelgalt protseduurilised ja suunatud avaliku sektori efektiivsuse tõstmisele. Teised arengud kajastavad aga palju ulatuslikemaid muutuseid ühiskondlikke protsesse puudutavate erinevate poliitikate rollis. Vahel tähendab see ulatuslikke arenguid teenuspakkumise mustris, delegeerides näiteks poliitika elluviimise tegevused erasektorile või kolmanda sektori organisatsioonidele. See on vast kõige otsesem seos avaliku sektori innovatsioonide ning erasektori poolse teenuspakkumise algatamise vahel. Avaliku sektori teenuskontseptsioonide ümberkujundamiseks vajalike kommunikatsiooni- ja infotehnoloogiliste lahendite avalikud hanked pakuvad samuti seose avaliku sektori innovatsioonide ja eraettevõtete innovaatiliste arengute nõudluspoolse soodustamise vahel. Avaliku sektori organisatsioonide potentsiaalne eestvedaja roll innovatsiooni algatajatena peaks samas andma tõuke innovaatilise mõttelaadi levikule inimeste ja ettevõtete seas. Kui avalik sektor suudab kõrvale heita oma negatiivse varjundiga imago kui arvatavalt kõige bürokraatlikum ja paindumatum ühiskonna osa, suunab see positiivse näitena ja toetavate poliitikatega uuendusmeelsusele teisigi sektoreid.

Kuigi avaliku sektori innovatsioonidel ja erainnovatsioonidel on mitmeid ühiseid tunnusjooni, on neil ka mõningaid olulisi erinevusi. Avaliku sektori innovatsioonid peaksid edendama avalikku hüvist ja suurendama avalikkusele pakutavat väärtust.

Seega peaksid nende investeeringute peamised kasud olema selgelt suunatud avalikkuse huvide teenimisele. Siiski ei tähenda see, et avalikud innovatsioonid ei võiks saada lisajõudu täiendavatest seostest eranõudlusega. See potentsiaal vastastikku tugevdavate avaliku sektori ning erainnovatsioonide tekkeks viitab sellele, et avaliku sektori innovatsioone tuleks tõepoolest kasutada ühe vahendina samasuunaliste erainitsiatiivide soodustamiseks. Seda tuleks aga teha siiski väga ettevaatlikult, sest eksimused avalike teenuste pakkumise ümberkujundamisel võivad tuua kaasa negatiivse mõju, mida tugevdavad veelgi eksliku impulsi ajel

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toimuvad nihked erasektoris. Seega avaliku ja erasektori ühised innovaatilised algatused kätkevad endas sotsiaalseid riske.

Käesoleva uuringu eesmärgiks on pakkuda võimalikke viise avaliku sektori innovatsioonide ja nõudluspoolsete innovatsioonipoliitikate seostamiseks Eestis. Analüüs toob esile avaliku sektori innovatsioonide tunnused ning innovatsioonide seosed erainnovatsioonidega. Seejärel pöördub vaatenurk ümber ning autor püüab leida seoseid nõudluspoolse innovatsioonipoliitika meetmete ja avaliku sektori innovatsioonide vahel. Tuginedes antud kahesuunalisele vaatele, sõnastatakse avaliku sektori innovatsioonide ja nõudluspoolsete innovatsioonipoliitikate vaheliste seoste arendamist puudutavad poliitikasoovitused.

Avaliku sektorit on vaadeldud kui bürokraatlikku, jäika, ebaefektiivset ja muutustele vastuseisvat. Siiski on kaasaegsed väljakutsed ja suurenev vajadus avalike teenuste järele sundinud sedagi sektorit otsima innovaatilisi arenguviise. Avaliku sektori innovatsioonid esindavad ühiskonnas mitmekülgsete ning mitme-eesmärgiliste innovatsioonide kogumit. Need innovatsioonid pole suunatud mitte üksnes efektiivsuse ja tõhususe suurendamisele, vaid avalike hüvede pakkumisele ning avalikkusele pakutava väärtuse suurendamisele. Erainnovatsioonide selgitamiseks kasutatavad mudelid on kasutusel ka avaliku sektori innovatsioonide juures, kuid stiimulisüsteemide erinevuse tõttu diskuteeritakse selle lähenemise asjakohasuse üle. Avaliku sektori innovatsioonidega seonduvad erinevad halduslikud raskused ja tõkendid, nagu näiteks organisatsioonidevahelised erinevused ning rajasõltuvus. Kui avalikel ja erapartneritel on aga piisavalt võimekusi teadmuse jagamiseks ning ühise väljundi suunas koostööks, siis saab avaliku sektori ja erainnovatsioone seostada ning seeläbi tugevdada.

Kasvu saavutamisele suunatud kaasaegne majanduspoliitika peaks rohkem tuginema majandusteaduslikele paradigmadele, mis hõlmavad ettevõtlikkuse ja innovatsiooni alaseid poliitikaid. See nõuab teadmuse jagamist, poliitikate ülekannet ja poliitikate innovatsiooni, kusjuures poliitikate innovatsioon on oluline meede tehnoloogiate ja nõudluse tekitamiseks. Nõudluspoolsed innovatsioonipoliitikad on potentsiaalsete kõrval ja välismõjudega keerukad poliitikad, mis on samas pakkumispoolsete meetmete olulisteks täienditeks. Nõudluspoolseid poliitikameetmeid on väga mitmesuguseid. Nad ei soodusta mitte üksnes innovatsioonide eraturu arengut, vaid avaliku sektori innovatsioonivõimekusi samuti. Nõudluspoolne innovatsiooni soodustamine, eriti läbi hankealgatuste ja kasutajakeskse toe pakkumise, on oluline ühenduslüli avaliku sektori innovatsioonide ja erasektori innovatsioonide vahel. Samas loovad nõudluspoolsed meetmed Euroopa Liidu raamistikus ühenduse ka riiklike ja rahvusüleste poliitikatasandite vahel.

Eestis on mitmeid näiteid avaliku sektori innovatsioonidest koos nõudluspoolse mõjuga. Näiteks kasutajakesksed info- ja kommunikatsioonitehnilised lahendused, nagu e-valitsus, e-maksuamet, e-tolliamet ning üksikisiku tuludeklaratsiooni ja ettevõtete majandusaruannete esitamise veebipõhised lahendused, mis on muutnud ühtlasi üksikisikute ja ettevõtete käitumisjoonist. Saastekvootidega kauplemise tulemusena algatatud sotsiaaltöötajate elektriautode, üleriigilise laadimisvõrgu

ehitamise ja elektriautode soetajatele toetuse pakkumise projekt on samuti avaliku sektori innovatsiooni ning innovaatilist eranõudlust põimiv. Samalaadselt innovaatilised on reoveest toodetud biogaasil sõitva linnatranspordi edendamine Tartus ning hoonete soojapidavamaks renoveerimise ja trammide kaasajastamise algatused keskkonnasuunaliste innovatsioonidena. Tallinna linnakodanikule tasuta ühistranspordile üleminek jaanuaris 2013, koos innovaatilise ühiskaardi abil staatuse valideerimissüsteemi juurutamisega, on avaliku sektori innovatsioon kohaliku omavalitsuse tasandil. Teadmusvahetuse aspektiks on huvitavaks näiteks Teadus- ja Innovatsioonipoliitika Seireprogrammi (TIPS) raames toimuvad regulaarsed seminarid, kus osalevad aktiivselt Haridus- ja Teadusministeeriumi töötajad. See on loonud omalaadse vastastikku lähendava õpikogemuse ning viib ühtlasi valmivate uuringute kaudu kokku erasektori kui infosisendi ja avaliku sektori kui infotarbija.

Teadlikkusse tõstmise aspektist on jätkuvalt oluline konkurss Ajujaht ning selle arenemine ajas. Üldiselt on Eesti innovatsioonipoliitika aga jätkuvalt keskendatud pakkumispoolsetele meetmetele.

Analüüsi tulemused ja näited Eesti poliitikapraktikate kohta võimaldavad teha poliitikate arendamiseks mitmeid soovitusi. Need ongi koos mõningate analüütiliste kaalutlustega alljärgnevalt põhjalikumalt ära toodud.

Eesti avaliku sektori innovatsioonialgatused võiks saada kasu kasutajakesksuse ja õppimisorientatsiooni suurendamisest avaliku sektori organisatsioonides, sealhulgas ministeeriumites, ametites ning sihtasutustes. Kasutajakesksusena ei mõelda siinkohal mitte kitsalt turupõhise vaate rakendamist avaliku poliitika protseduuride juures, vaid laiema arusaama omandamist kasutajate vajadustest. Õppimisorientatsioon aga tähendab, et nii avaliku sektori ametnikud kui organisatsioonid peaksid omandama teadmust ja võimekusi käies avatumalt läbi teiste seotud osapooltega. Seega kasutajakeskse ja avatud innovatsiooni paradigmade baasil ilmneb suurenenud vajadus avaliku ja erasektori koostööks.

Avalikud hankealgatused peaksid olema senisest veelgi enam pühendatud lahenduste otsimise tunnustele, mis arendaksid kõigi kaasatud osapoolte innovatsioonivõimekusi ning ettevõtlusvalmidust. Interaktiivne probleemidele lahenduse otsimise protsess kipub juba olemuslikult olema innovaatilisem kui niiöelda riiulist võetud valmislahenduste sisseostuhange ja kasutuselevõtt. Selles protsessis saab avalik sektor pakkuda vahendeid sotsiaalselt soovitud väljunditeni jõudmiseks, mis ei ole alati kommertsiaalselt turustatavad. Erasektori hankijad aga panustavad sellesse interaktiivsesse hankeprotsessi potentsiaalselt võimekuste arendamise aspekti ning konkureeriva püüdluse eesrindlikkuse suunas.

Konkureerimisena teostatud kommertsfaasi eelsete uurimis- ja arendusteenuste hange näib olevat väga hea poliitikameede soodustamaks arendusriskide ning kasude jagamist avaliku sektori ja erapartnerite vahel. See eeldab samas arengut partnerite vahel intellektuaalomandi õiguste jaotamise praktikate osas. Seega on tegu suhteliselt kõrge riskiastmega poliitikameetmega, mille rakendamisel võivad tekkida õiguslikud vaidlused koostöö tulemite kuuluvuse üle. Siiski loovad just need

kommertsfaasi eelsed algatused otsese seose avaliku sektori innovaatilisuse ning erauurimis- ja arendustööpanuste nõudluse kasvu vahel. Sellisena edendab hange juba kommertsfaasi eel tõenäoliselt kõigi kaasatud osapoolte arenguvõimekusi.

Samalaadsed võimalused ja väljakutsed on seotud avaliku sektori ja erasektori koostööga kommertsialiseerimispartnerluste vormis. Läbirääkimised selle üle, et kuidas jagada intellektuaalse omandi õigused, võivad osutuda veelgi keerukamaks kui eelmise meetme puhul, sest kommertsialiseerimise faasis on õigustega seonduvad väärtusvood juba palju selgepiirilisemad. Eeldusel aga, et need partnerlused on suunatud täiendavate väärtuspakkumiste leidmisele, mis ei sea ohtu avaliku teenusega seotud tuumikväärtuse pakkumist, on seesugused partnerlussuhted meetmena siiski soovitatavad. Siiski jääb intellektuaalse omandi õiguste jagunemine keskseks poliitiliseks küsimuseks, mis võib kas soodustada, kui toimub vastastikusel nõusolekul, või takistada kahe viimase poliitikasoovituse rakendamist. Eesti suhteliselt väikest avaliku ja erasektori läbirääkimiste kogemust selles valdkonnas võib vaadelda märkimisväärse arengumahajäämusena.

Nõudluspoolsete innovatsioonipoliitika meetmete kasutamine koostoimes avaliku sektori innovatsioonidega vajab senisest lõimitumat lähenemist. See tähendab, et halduslahendused peaksid olema paindlikumad ning vältima lukustumist konkreetse avaliku organisatsiooni rajasõltuvusse. Seepärast peaks avaliku sektori poliitika soodustama seesuguseid koostööprojekte erinevate avaliku sektori agentuuride vahel, mis teadlikult eiravad nende traditsioonilisi alluvussuheteid, et edendada seeläbi organisatsioonidevahelist teadmusvahetust ning organisatsioonideülest meeskonnatööd. Seda on lihtsam öelda kui teha, kuid uute innovaatiliste poliitikavõrgustike potentsiaalsed kasud kaaluvad tõenäoliselt üles isegi hästi paika pandud poliitiliste rutiinide efektiivsust taotlevad omadused.

Seost avaliku sektori innovatsioonide ja nõudluspoolse innovatsioonipoliitika vahel saaks tugevdada võttes nõudluspoolsed poliitikameetmed kasutusele hästi määratletute ja mitme-eesmärgilistena. Näiteks innovatsiooniteadlikkuse kasvu meetmed võiksid kõnetada nii avalikkust laiemalt, kui olla samas erisuunatud just avaliku sektori töötajate harimisele. Nende väliste ja siseste vaatenurkade kombineerimisega poliitikakujunduses omandavad ühiskonna sektorid parema arusaama üksteise stiimulitest. See omakorda soodustab edukat koostööd. Algul võib mitme-eesmärgiline kasutus näida isegi segaduste potentsiaalse allikana, kuid ajapikku aitab nõudluspoolsete poliitikameetmete mitmekihilisus kasutada avaliku sektori võimekusi jõulisemalt ning täpsemal moel.

Nõudluspoolseid innovatsioonipoliitikaid iseloomustavad rahvusvahelised välisefektid, mis tähendab, et neist saavad kasu ka välismaised innovaatiliste lahenduste pakkujad. See loob vajaduse viia riigi tasandi poliitikad kooskõlla rahvusüleste ja regionaalsete algatustega. Siiski peaks avalik sektor seejuures rakendama „mõtle globaalselt kuid tegutse lokaalselt“ lähenemist ja mitte imiteerima mujal edu toonud lahendusi ilma neid piisavat kohalikele oludele kohandamata. Võrgustikkoostöö poliitikate ülekandmiseks on küll samuti oluline, kuid poliitika ja/või teenusinnovatsioonid avalikus sektoris vajavad siiski pigem mitte

tervikpoliitikate vaid poliitikate elementide ümbermõtestavat ülekannet, et leida kõige tulemuslikum sobivus kohalike nõudmistega. Ümbermõtestamine tähendab, et need on just poliitikate üksikelemendid mida on tarvis mõista, sügavuti analüüsida ning vajadusel ümber paigutada kohalikesse oludesse sobivamal moel.

Nõudlustloovad avaliku sektori innovatsioonid võiksid tugineda küll erasektori paradigmadele osapoolte koostöös toimuvate innovatsioonide kohta, kuid seda siiski laiendatud moel ehk lõimides avaliku sektori stimuleerimissüsteemid nendesse mudelitesse. Seega seondub selliste innovatsioonidega märksa keerukam ja peenekoelisem ülesehitus kui pelgalt erasektorit haaravate koostööde puhul. Siiski ilma avaliku sektori tegevusstiimulite lülitamiseta eranõudluse soodustamisse, on tõenäoline, et head kavatsused päädivad tõsiste elluviimisprobleemidega lihtsalt pikaajalise kokkusobimatuse tõttu avaliku sektori poliitikate loogikaga.

Erasektori innovatsioonide mõju avalikku sektorisse leviku ning vastupidise leviku esmane edutegur on erinevate osapoolte suutlikus tõhusalt suhteid arendada ja teadmust üle kanda. Seetõttu ongi toodud soovituste keskmes just koostöö- ja õppimisaspektid.

Käesoleva uuringu piirangud seonduvad asjaoluga, et avaliku sektori innovatsiooni teaduslik diskursus ning innovatsioonipoliitika diskursus on mõningate aspektide osas kattuvad. See võib luua teatud segadust põhjus-tagajärg seoste tõlgendamisel. Samuti puudub piisav empiiriline tõendusmaterjal selle kohta, et mõningad nõudluspoolsed poliitikameetmed on teadlikult kavandatud mitme-eesmärgilistena.

Uuringu teoreetilised järelmid seonduvad sellega, et nõudlustloovad avaliku sektori innovatsioonid pakuvad ainest uueks teaduslikuks diskursuseks, mis keskenduks just nõudluspoolse innovatsioonipoliitika meetmete mitmekülgsele ning komplitseeritud olemusele avaliku ja erasektori koostööd eeldavate avaliku sektori innovatsioonide keskse elemendina.

Juhtimisalasteks järelmiteks on kommertsfaasi eelsete või kommertsialiseerimise alaste avaliku ja erasektori partnerlussuhetega seonduvad rohked ärivõimalused, mille abil võidakse luua intellektuaalset omandit, mis omab väärtust väljaspoolgi riigipiire.

Tulevased uuringud peaksid keskenduma nõudluspoolsete innovatsioonipoliitika meetmete kasutamise käigus ilmnevate negatiivsete ja positiivsete mõjude või välisefektide analüüsimisele. Riikliku tasandi tarbeks kohandatud nõudluspoolsete poliitikameetmete rakendusvõimalused vajaksid samuti senisest enam uurimist.

HAJUS VAADE EUROOPA LIIDU RIIKIDE MAKSUSTRUUKTURIDELE

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Artiklis analüüsitakse Euroopa Liidu riikide maksustruktuuri muutusi viimasel kümnendil. Eesmärk on markeerida seoseid maksude struktuuri ja majanduskasvu vahel. Maksustruktuuril on oluline mõju majanduskasvule. Hiljutisest majanduskriisi valguses on Euroopa maksupoliitikaga tegelevad institutsioonid teinud ettepanekuid ka maksustruktuuri ümberkujundamiseks. Eesmärgiga ergutada majanduskasvu nähakse ette nihutada maksukoormust tööjõu maksustamiselt tarbimise, loodusressursside kasutamise ja kinnisvara maksustamisele.

Alates oma loomisest on EL-i maksupoliitika olnud keskendunud maksutõkete kõrvaldamisele piiriüleselt majandustegevuselt ning võitlusele kahjuliku maksukonkurentsi vastu. EL Komisjoni maksupoliitika strateegia ei näe ette vajadust ühtlustada otseseid makse; eelkõige on fookus suunatud kaudsete maksude ühtlustamisele, et tagada ühise turu sujuv toimimine.

Sügav majanduslangus aastatel 2009-2010 ja riigivõla kriitiline tase on aga suunanud EL-i riikide fookuse oma maksusüsteemi tõhustamise vajadusele. Maksud ei peaks mitte ainult hõlbustama sujuvat piiriülest kaubandustegevust, vaid peaks võimaldama koguda piisavalt tulusid avaliku sektori vajadusteks ning mitte pidurdama majanduskasvu.

EL Komisjoni sihiks on "maksusüsteemi kvaliteedi" tõstmine, mis kokkuvõtteks suurendaks ka majanduskasvu. Sel eesmärgil nähakse ette maksustruktuuri kujundamist sel moel, mis suunaks maksukoormuse "tööjõult tarbimisele". Tööjõumaksude asemel tuleks rohkem koormata tarbimist, looduskeskkonna ja loodusvarade kasutamist ning kinnisvara. EL-i komisjon toob välja, et need maksud toova kaasa vähem moonutusi ja põhjustavad majandusele vähem kahju kui otsesed töö-ja tulumaksud.

Maksustruktuuri ja majanduskasvu vaheliste seoste esiletoomine on suhteliselt uus uurimisvaldkond. Teoreetiline raamistik optimaalse maksustruktuuri kujundamiseks on esmakordselt esitatud Atkinson'i ja Stiglitz'i poolt (1976). Mitmed autorid on avardanud arusaama maksustruktuuri seostest majanduskasvuga (Martinez-Vazquez, 2010); mitmed rahvusvahelised institutsioonid on ka uuringus tähelepanu pööranud maksustruktuuriga seotud aspektidele (Euroopa Komisjon 2012, OECD 2012).

Diskussioon efektiivse maksustruktuuri teemadel on siiski eraldiseisev erinevate maksude individuaalsete omaduste üle. Võrreldes näiteks tulumakse tarbimismaksudega leitakse, et esimesed on majanduskasvule rohkem kahjulikud kui tarbimise või looduskeskkonnaga seotud maksud (Myles 2009; Johansson 2008). Teiselt poolt, võimalus tulumaksumäära diferentseerida võimaldab paremini saavutada tulude ümberjaotamisega seotud eesmärke. Seega, ühiskond ei saa asendada kõiki "kahjulikke" makse „majanduskasvu sõbralike" maksudega.

Praegusel ajal pole siiski jõutud ei teoreetiliste ega empiiriliste uuringute käigus üldise optimaalse maksustruktuuri väljatöötamisele. Sobiv maksustruktuur sõltub igale riigi konkreetsetest majandustingimustest ja ühiskonna eelistustest. Seega on maksustruktuuri optimiseerimine üpris kompleksne tegevus. Paratamatult tuleb kasutada erinevate mõjudega maksuliike, mis võimaldaksid rahastada avaliku sektori tegevust, soodustada majanduskasvu ja liikuda parema tulujaotuse suunas ühiskonnaliikmete vahel.

Mitmed rahvusvahelised organisatsioonid klassifitseerivad makse erineval moel (näiteks OECD või Euroopa Liidu klassifikatsioonid). Antud tekstis maksud on struktureeritud ESA95 klassifikatsiooni alusel. Sellest lähtes on maksud jaotatud maksuliigi ja maksustamise baasi alusel. Maksude liigi alusel on tegemist tootmis-ja impordimaksudega (nimetatakse ka kaudseteks maksudeks); tulu-, omandi ja kapitalimaksudega (otsesed maksud) ning kohustuslikke sotsiaalkindlustusmaksetega (tähistame neid ka lühendiga SSC).

Kaudsed maksud on käibemaks (VAT); aktsiisimaksud (nt. alkohol ja tubakas) ja muud tarbimisega seotud maksud. Otsesed maksud on nii füüsilise isiku kui äriühingu tulumaks (kasumimaks) ja kapitalituludega seotud maksud.

Teiseks maksude liigitamise aluseks on majandustegevus, millest lähtudes makse kogutakse. Nimetame seda ka maksubaasiks. Üldistatult on tegemist nelja maksubaasiga – tarbimine; tööjõu- või kapitalitulu ning looduskeskkonna kasutamine. Üldises plaanis on tarbimismaksud samas suurusjärgus kaudsete maksudega; tööjõu maksud seonduvad summeerituna üksikisiku tulumaksu ja sotsiaalmaksudega; kapitalimaksud põhinevad kapitali ja tootmisvahendite (ka kinnisvara ja maa) kasutamisel.

Artiklis analüüsitakse agregeeritult Euroopa Liidu riikide maksustruktuuri muutusi viimasel kümnendil (2000-2010) ning vaadeldakse maksustruktuuri ja majanduskasvu vahelisi seoseid. Defineerime siinkohal maksustruktuuri kui konkreetse maksuliigi mahtu võrrelduna SKP suurusega või maksuliikide osakaalu kogumaksudes. Majanduskasvu defineeritakse kui EL riikide SKP taset jooksvates hindades arvestatuna ühe elaniku kohta. Tekstis toodud ajalised perioodid ja maksutasemed on arvutatud EL riikide kolme aasta keskmistena. Korrelatiivsete seoste leidmisel on kasutatud Exceli punktdiagrammi funktsiooni ning lisatud on ka trendijoon (regressioon) ja R^2 väärtus, mis näitab trendijoone poolt kirjeldatud näitajate vaheliste seoste ulatust ja tugevust.

Viimase kümnendi jooksul EL-i riikide üldine maksukoormus olnud suhteliselt püsiv, ulatudes (koos SSC) umbes 40%-ni võrrelduna SKP-ga. Aastal 2011. olid kaudsed maksud 13,1%; otsesed maksud 12,6% ja sotsiaalkindlustusmaksed 13,9% SKP-st. Sarnaselt maksukoormusega oli maksude struktuur EL-is suhteliselt stabiilne. Samas on üldine majanduskasv kümnendi vältel on olnud kiirem neis riikides, kus oli esialgselt (2000-2002) madalam maksukoormuse tase.

Kuidas on muutunud maksude struktuur võrreldes SKP-ga? Tööjõu ja kapitalimaksude tase on väga tugevas korrelatsioonis kümnendi alguses ja lõpus. Riigid, mis kasutasid kõrget/madalat tööjõu ja kapitali maksustamist perioodi alguses, tegid seda ka kümnendi lõpus. Samal ajal on nende maksude tase SKP-s mõnevõrra vähenenud. Nõrgem on korrelatsioon tarbimismaksude kasutamises; samal ajal ei ole tarbimismaksude tase SKP-s vähenenud.

Ka EL- i riikide kogumaksude struktuur on olnud suhteliselt püsiv; siiski on toimunud väike nihe tööjõult tarbimismaksude suunas. Seega pikaajaliselt on EL poolt soovitud protsess ka toimumas – maksukoormus on liikunud tööjõult tarbimisele.

Kümnendi vältel on selgelt nähtav püsiv ja positiivne korrelatsioon sissetulekute taseme ja maksukoormuse vahel. Mida suurem on sissetulekute tase riigis – seda kõrgem on ka maksude tase. Kiire kasv SKP tase Euroopa Liidu uutes liikmesriikides on küll vähendanud sissetulekuerisusi, aga ei ole võrdsustanud samal määral maksukoormuse taset.

Kuidas ühiskonna sissetulek on seotud maksude struktuuriga? Üldreegel on selline, et madalama tulutasemega riikides on suurem osakaal kaudsetel maksudel. Nendes riikides on otseste maksude baas (tulu ja kasum) sageli piiratud. Seetõttu keskendub maksustamine rohkem tarbimisele. Lisaks on madalama sissetulekuga riigid sageli administratiivselt vähem suutlikud tuluga seotud maksude kogumisel. Jõukamad ühiskonnad aga kasutavad proportsionaalselt rohkem otseseid makse. Kõrgem sissetulek ja haldussuutlikkus võimaldavad koguda suhteliselt rohkem tulu isiklike sissetulekute ja ettevõtete kasumite alusel.

Viimase kümnendil on EL riikide maksustruktuurid seda eelpooltoodud seost ka kinnitanud. Madalama sissetulekuga ELi riigid kasutavad rohkem kaudseid makse ja vähem otsesest maksustamist. Perioodi lõpus on korrelatsioon tulutaseme ja kaudsete maksude kasutamise vahel veelgi tugevnenud. Uued ELi liikmed olid enamasti madala sissetulekuga Kesk-ja Ida-Euroopas riigid. Lähtudes EL kaudsete maksude harmoneerimise nõudest suurendasid nimetatud riigid tarbimismaksude määrasid (VAT, aktsiisid, jm.) ning kehtestasid uusi kaudseid makse. See kõik suurendas ka madalamatululiste riikide kaudsete maksude koormust.

Sarnaselt kaudsete maksudega on ka otsesed maksud tugevas (positiivses) korrelatsioonis tulutasemega. Rikkamad ühiskonnad kasutavad rohkem otseseid makse kui madalatululisemad riigid ning see seos on Euroopas kümnendi vältel tugevnenud.

Kuidas on seotud maksustruktuur pikaajalise majanduskasvu ja lühiajaliste tsükliliste kõikumistega? Artikkel vaatleb pikaajalist majanduskasvu (2000 kuni 2010) ja maksustruktuuri seoseid. Perioodi vältel on mõnevõrra kiiremini kasvanud need riigid, kus on suurem osakaal kaudsel maksustamisel. Samas on korrelatsioon suhtelisel nõrk ning kaudsete maksude osakaalul on üsna piiratud mõju majanduskasvule. Lühiajaliselt aga puudub oluline seos majanduse tsükliliste

kõikumiste vahel. Ei majanduslanguse ulatus 2009 ega taastumine järgneval aastal ei ole korrelatsioonis kaudsete maksude osakaaluga tuludes.

Erinevalt kaudsete maksudest on otseste maksude osakaal ja pikaajalise majanduskasvu (negatiivne) seos väga tugev. Madalama tulutaseme ja väiksema otsese maksukoormusega riigid on saavutanud selgelt kiirema majanduskasvu. Otsese maksustamise madal tase osa selgitab ka üsna suures mahus SKP kasvu põhjusi viimase kümnendi jooksul. Aga sarnaselt kaudsete maksudega puudub seos otseste maksude ja lühiajaliste tsükliliste kõikumiste vahel.

Jälgides tarbimismaksude ja majanduskasvu seosed näeme, et tegemist on üpris sarnase seostemustriga kui oli kaudsete maksude puhul. Tegemist on loogilise tulemusega, sest maksubaasid suures osas kattuvad. Samas on tarbimismaksude ja majanduskasvu seos mõnevõrra tugevam kui kaudsete maksude puhul.

Tööjõumaksude taseme ja majanduskasvu vahel aga puudub oluline seos nii pika- kui lühiajaliselt. See on mõnevõrra üllatav ja vastuoluline tulemus. Euroopa liidu maksuinitsiatiivid on viimastel aastatel korduvalt rõhutanud vajadust kanda maksukoormus tööjõu maksustamiselt üle tarbimisele ja keskkonnamaksudele. Artikli autor aga ei siinkohal leidnud otsest korrelatsiooni tööjõumaksude osakaalu ja majanduskavu vahel. Olukorda võiks aga tõlgendada järgmiselt. Erinevate EL-i liikmesriikide tööjõumaksude struktuur on väga erinev. Need hõlmavad nii üksikisiku tulumaksu ja sotsiaalkindlustusmakseid. Sageli eri tüüpi maksud aga tasakaalustavad üksteist. Näiteks Taanis kõrge üksikisiku tulumaksu tase kombineeritud madala SSC tasemega. Nii kõrge tulumaksu kui sotsiaalkindlustusmaksete tase on negatiivselt seotud majanduskasvuga. Taani näite puhul aga need maksud tasakaalustavad üksteist.

Kokkuvõttes, Euroopa Liidu riikide maksukoormus on olnud kümnendi vältel üsna stabiilne. Perioodi vältel on tarbimise maksustamine mõnevõrra kasvanud; tööjõu ja kapitali maksustamine aga vähenenud. Suurema kaudsete maksude osakaaluga riigid on kasvanud veidi kiiremini; samal ajal on kõrge otsese maksustamise tase tugevas negatiivses korrelatsioonis pikaajalise majanduskasvuga. Vaatamata EL maksupoliitika eesmärgile suunata maksustamist tööjõult tarbimisele, ei ole tegemist kõikidele maadele kohandatava optimaalse maksustruktuuri üldreegliga. Optimaalne maksustruktuur sõltub pigem iga riigi konkreetsetest tingimustest ning ühiskonna majanduslikest ning sotsiaalsetest valikutest.

EUROTSOONI MAJANDUS- JA FINANTSKRIISI LAHENDUSMEETMED JA VALIKUD MÕJUGRUPPIDE SEISUKOHAST

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Sissejuhatus

Euroopa Liidu majanduslikud ja poliitilised mõjugrupid on viimase nelja aasta jooksul otsinud aktiivselt lahendust nii süsteemsele finantskriisile, kui sellest tulenevale mitmete liikmesriikide eelarvedefitsiidi ja valitsuse võla kuhjumisele. Lahendust vajatakse nii lühiajalise maksevõime, pikaajalise majandusliku konkurentsivõime ja ühiskondliku jätkusuutlikkuse seisukohalt. Lisaks on omavahel põimunud poliitilised ja majanduslikud aspektid: selleks, et toimivaid reforme ellu viia, peavad poliitilised liidrid püsima piisavalt stabiilselt võimul, saama selleks valijate hääled ja majanduslike mõjugruppide rahalise toe.

Käesolev artikkel keskendub Eurotsooni saneerimise ja reformimise käigus tehtud otsuste hindamisele mõjugruppide seisukohast. Keskseks uurimisküsimuseks on: Miks ja kuidas kujunes mõjugruppide roll Eurotsooni kriisi käigus ümber viisil, kus rahvuslike valitsuste domineeriv roll asendus riikideüleste institutsioonide (ESM, EFSF ja Euroopa Keskpank) domineeriva rolliga.

Artikkel kombineerib politoloogilisi ja majandusteaduslikke analüüsmeetodeid, kuivõrd eesmärgiks on mõtestada poliitliste osaliste käitumist majanduslike ja poliitiliste protsesside koosmõjul. Uurimisülesanneteks on:

- Määratleda kesksed mõjugrupid ja nende valikud ning dilemmad Eurotsooni ja selle kriisi käigus aastatel 2008-2012.
- Protsessi järgmise ja narratiivse analüüsi metoodikaga kaardistada Eurotsooni kriisi käigus võetud meetmeid ja nende seosed mõjugruppidega.
- Kaardistada mõjugruppide jõujoonte ümberkujunemise trendid kriisi käigus ja analüüsida põhjuslike seoseid selles protsessis.

Esmalt analüüsitakse, millised teoreetilised dilemmad mõjugruppide ees perioodil 2008–2012 seisid. Uuringu empiiriline osa vaatleb seejärel, millised olid peamised osalevad mõjugrupid, millised kesksed otsused on Eurotsooni võlakriisis tehtud ja millist mõju on tehtud otsused mõjugruppidele avaldanud. Analüütiline osa hindab, kuivõrd on tehtud otsused mõjutanud mõjugruppe ja kui mõjukad on nad kriisilahendusprotsessi vältel ise olnud. Uuringu tulemuste tõlgendus käsitleb ka Eesti poliitilise ja majandusliku eliidi huve ning osalemist eurotsooni käsitlevate kesksete otsuste suunamisel.

1. Teoreetilised dilemmad Eurotsooni mõjugruppide ees 2008-2012

Mõjugruppide ees seisvad teoreetilised dilemmad seoses Eurotsooni kriisiga on olnud põhjalikult arutlusel nii Euroopa poliitikute, teadlaste kui ajakirjanduse poolt. Dilemmad ilmnevad nii lähtuvalt poliitilise ja majandusliku ratsionaalsuse erisusest teatud kriisi olukordades, kui ka tulenevalt mõjugruppide hinnangute aluseks oleva ajalise perspektiivi erinemisest (lühiajalised versus pikaajalised huvid). Eristuda võivad ka hindamise aluseks olevad sisulised kategooriad – siin eelistavad osad grupid pragmaatilisi mudeleid ja osad jällegi dogmaatilisi (Mugge 2011). Euroopa Liidu, kui institutsionaalse süsteemi seisukohalt muudab olukorda veelgi keerukamaks tavapäraste rahvuslike poliitiliste osalejate mõju kombineerumine EL-i rahvusüleste institutsioonide administratiivsete liidrite mõjuga.

Kriisilahenduse seisukohalt on oluline ka laiem küsimus, kas Eurotsooni juhtimisel peaksid osalised lähtuma turusignaalidest ja loogikast või pigem püüdma näiteks Euroopa Keskpanga (EKP) poliitika ja vahenditega turukäitumist suunata (Schmidt 2010). Olukorda komplitseerib asjaolu, et tihti on pikaajaliselt jätkusuutmatu majanduslik nn. kulutamispoliitika poliitiliste parteide populaarsuse allikaks osade valijate silmis. Eelneva küsimusega on seotud ka dilemma, millist intressimäärade kujunemise loogikat toetada. Ühelt poolt toob turusignaalidel põhinev süsteem kaasa diferentseeritumad ja reeglina summaarselt kõrgemad intressid, samas kui sekkumismeetmetega kontrollitud ja madalamate intressimäärade puhul puudub turu tagasiside valitsustele, kes võivad selle tulemusel ülekulutamisesse kalduda ja vajalikke reforme edasi lükata. Pikaajalised ja fundamentaalsed vastuolud poliitilise ja majandusliku edukuse vahel siiski puuduvad – toimiv poliitiline süsteem ja õigusriik toetavad reeglina ka majanduse stabiilset arengut (Przeworski 1991). Teisalt võib aga kriisiolukorras võitev (win-win) valikute kombinatsioon mõjugruppide ees nii majanduslikus, kui poliitilises aspektis üldse puududa ja seega ei sõltu kriisist väljatulek neis olukordades kuigivõrd sellest, kui osav poliitiline eliit oma tegutsemises on.

Dilemma majanduslike ja poliitiliste prioriteetide vahel võib mõjugruppide jaoks tekkida ka juhul, kui poliitiliselt oluline (või isegi sümboolne) nähtus ongi pikaajalise majandusliku probleemi põhjuseks. Nii võib poliitiliselt ülioluline ja iga hinnaga kaitstav (Draghi 2012) ühisraha euro olla üks käesoleva kriisi süvapõhjusi, takistades näiteks tööturgude kohandumist ja tootlikkuse kasvu (Cabannes 2011).

Sarnane dilemma tekkib seoses kriisi reguleerimise ja selle mõjuga Eurotsooni tööhõivele. Siin vastanduvad omavahel lühiajaline poliitiline motivatsioon saada valijate toetust ja keskpikk majanduslik loogika tööturgude kohandumise osas. Poliitiliselt on kasulikud pigem kohesed ja ulatusliku toetusprogrammid, mis paraku tööjõuturgu ei mobiliseeri ega reformi. Osalt kriisi reguleerivate meetmete tõttu oli näiteks 2013 aasta jaanuaris Eurotsooni tööpuudus suurem Eurot mitte kasutavate EL liikmesriikide tööpuudusest. Kriisisituatsioonis toetuste andmine võib tunduda mõistlikum alternatiiv ka seetõttu, et seeläbi kasvav rahapakkumine nõrgestab ühist valuutat ja seega suure tõenäosusega muudab Eurotsooni kaubad eksporturgudel

konkurentsivõimelisemateks, mis võiks pikas perspektiivis viia nii tootmise kui tööhõive kasvuni (Eichengreen 2009).

Dilemma võib tekkida ka pooleli jäänud integratsiooniprotsessi tõttu, mille jätkamiseks puuduvad ressursid või tahe. Nii peavad rahandusteoreetikud Mundell ja Friedman Euroala peamiseks probleemiks olukorda, kus valuutaliit eksisteerib ilma eelarveliiduta. Samas aga puudub enamikel liikmesriikidel motivatsioon eelarveliidu loomiseks (Friedman ja Mundell 2001).

2. Eurotsooni poliitika kujundamine, kriisilahendusmeetmed ja reformid

Eurotsooni majanduslikus ja rahanduslikus olukorras on 2013. aasta alguseks toimunud olulised muutused: nii poliitilised liidrid oma sõnavõttudes, kui ka investorid oma riiklike võlakirjade ostusotsustes on avaldanud usku, et kriisi teravaim faas on möödas. Peamiste majandusindikaatorite osas on aga olukord 2013. aastal isegi kriitilisem, kui kriisi puhkedes 2008. aastal. Eurotsooni koguvõlg ja perifeeriariikide valitsuste koguvõlg on Eurotsooni ajaloo rekordtasemel, samuti on Eurotsooni ajaloo kõrgtasemetel tööpuudus ja inflatsioon. Ka pikaajaline väljavaade ei ole positiivne – laiema trendina leiab aset elanikkonna vananemine ja rahvusliku võla kasv ühe elaniku kohta. Seda negatiivset väljavaadet täiendavad kriisilahendusmeetmetest tulenevad nn. teise ringi efektid: kokkuhoiumeetmed põhjustavad majanduslangust, see omakorda põhjustab maksude laekumise langust, mis omakorda tekitab täiendavat eelarve defitsiiti ja vajadust lisakokkuhoiuks. Eelneva põhjal ei ole seega otsest ratsionaalset põhjendust investorite edasise optimismi kasvuks (Papadimitrou ja Wray 2011).

Millised asjaolud on sellisel juhul olnud turgude optimismi põhjuseks? Esmalt veensid turge summaarselt toimivad toetusmehhanismid Kreekale, Portugalile ja Iirimaale. Seda täiendasid EKP otsustavad tugiostud Hispaania ja Itaalia võlakirjadele. Liikmesriikide poolt loodud täiendavad finantsinstitutsioonid (GLF, EFSM, EFSF ja ESM) andsid lisakindlust, et Eurotsoonil on pikaajaline toimiv maandusmehhanism võimalike riskistsenaariumite vastu. Tugiostud ja toetusmehhanismid hakkasid tulemust andma 2012. aasta kolmandas kvartalis, kui probleemsete euroala riikide intressimäärad hakkasid alanema. Täiendavalt pakkus Euroopa Keskpank liikmesriikide kommertspankadele likviidsusprogrammi (LTRO), tagamaks pankade refinantseeritust ja huvitatust riiklikest võlakirjadest. Turgude jaoks oli oluline ka poliitiliste liidrite suhtumine reformidesse – ühelt poolt piisavalt koostöövalmis, et lahendust otsida, teisalt jällegi piisavalt passiivne, et jätta lõpplahenduse kujundamine rahvusülestele institutsioonidele.

Kui EKP tugiostu- ja likviidsusprogrammide abil oli esmane turusurve maandatud ja rahvuslike liidrite toetus kindlustatud, võttis Euroopa Keskpank ametliku positsiooni, et teeb ka edaspidi „mis vajalik ja võimalik, et tagada euro stabiilsus sõltumata sellest, kui suureks abi vajadus kasvab“ (EKP presidendi Mario Draghi kõne 26. Juulil 2012). Turgude reaktsioon antud lubadusele oli probleemsete Eurotsooni liikmesriikide võlakirjade intressimäärade jõuline langus, mis riikide jaoks tähendas madalamaid refinantseerimiskulusid ja maksevõimesurve alanemist.

Eelkõige viimaste otsuste valguses tõusiski Euroopa Keskpank kriisi reguleerimisel aktiivseimaks osaliseks, samas kui rahvuslikud poliitilised liidrid kaotasid osaliselt varasemat mõju.

Eesti osales kriisilahendusmeetmete otsustusprotsessis eelkõige poliitiliste liidrite tasemel, peamine koormus langes rahandusministrile, peaministrile ja Riigikogu rahanduskomisjonile. Senist tulemust on poliitikud hinnanud Eesti jaoks soodsaks, eelkõige kiire stabiliseerimise ja seniste väikeste otseste kulude tõttu. Majanduslike mõjugruppide ja valijate osalus jäi aga Eesti kontekstis passiivseks.

3. Ühiskondlike mõjugruppide roll Eurotsooni kriisis ja reformide suunamisel

Mõjugruppide analüüsi teoreetilised lähtekoha pärinevad organisatsioonikäitumise ja ärieetika uuringutest, kuid on leidnud hilisemat kasutamist ühiskondlike majanduspoliitiliste protsesside seletamisel (Freeman 1984). Peamised osalevad grupid, mis kriisi reguleerimist ja reforme mõjutasid olid valijad (teatud osas ka mittekodanikud), poliitilised osalejad (sealhulgas liidrid), majanduslikud osalejad, EL-i riikidesülesed administratiivsed osalejad (Euroopa Keskpank ja Euroopa Komisjon) ning rahvusvahelised finantsinstitutsioonid (eeskätt Rahvusvaheline Valuutafond). Peamised kategooriad mõjugruppide analüüsimisel on võim, mõju, legitiimsus ja väärtus (Mitchell and Wood 1997). Mõjugruppe saab täiendavalt analüüsida meelestatuse aspektist (aktiivne - passiivne, positiivne - negatiivne, koostööle orienteeritud – koostööle mitte orienteeritud, end mõjugrupina tunnetav – end mõjugrupina mitte tunnetav) (Turner and Kristoffer 2002).

Valijad kontrollivad hääletamise kaudu poliitilisi osalejaid ja liidreid ning nende huve tuleb seetõttu järgida nii pika- kui lühiajalises plaanis, kuitahes ebaratsionaalsed või vastukäivad need ka ei ole (Lipset 1959). Kuigi valijate otsuseid domineerivad lühiajalised huvid ja emotsioonid, on nad samal ajal huvitatud jätkusuutlikust ühiskondlikust stabiilsusest, tarbimiskindlusest, kõrgest tööhõivest, turvalisusest ja optimistlikest kasvuväljavaadetest eelkõige tarbimise osas. Valijad pooldavad reeglina kriisi kiiret saneerimist eelarveliste vahenditega, isegi kui see piirab ühiskondlikke investeeringuid tulevikus, ning teevad oma poliitilised otsused tihti ilma põhjalike eelteadmisteta riigieelarve mahtude ja rahanduspoliitika põhimõtete osas (Birch 1993). Valijad on otsustusprotsess osalemisel reeglina passiivsed ja kanaliseerivad oma huve poliitiliste osalejate kaudu. Kuivõrd aga ühtviisi kaalukad on nii teadlike kui mitte-teadlike valijate hääled, peavad poliitikud oma otsustes kaaluma mõlema grupi reaktsioone. Valijate eelistused sõltuvad grupiti ka sellest, kas tegemist on nn neto-maksumaksjatega või neto-toetuse saajatega.

Poliitilised osalejad ja poliitilised liidrid moodustavad ühe aktiivseima grupi otsuste kujundajate hulgas (Held 2006). Eurotsooni kontekstis on kõige aktiivsem roll valitsusjuhtidel, rahandusministritel ja rahvuslike keskpankade presidentidel. Ükski neist positsioonidest ei ole otsevalitavad, vaid sõltuvad rahvusparlamendi (ja/või presidendi) mandaadist (mis siiski ei ole midagi erakordset esindusdemokraatia raames). Valijate poolt otsevalitud poliitikutest on Euroopa

Liidu rahanduspoliitika osas kõige mõjukamad rahvusparlamentide rahandus–komisjonide liikmed. Täitevvõimu ja seadusandliku võimu omavahelises võimujaotuses oli enne kriisi puhkemist 2008 tavaks, et lisapädevused ja mandaat anti valitsuse liikmetele parlamentide erakorraliste täiskogu istungite raames, 2012. aastal tõusis aga domineerivaks meetod, kus ministritele mandaadi andjaks oli täiskogu asemel parlamendi allkomitee (antud mudelit järgib ka Eesti Vabariik). Rahvuslike poliitiliste institutsioonide kõrval omavad olulist otsustusprotsessi-alast kaalukust ka rahvuslikud keskpangad, Euroopa Keskpank ja Euroopa Stabiilsusfond (EFSF). Kõigil neil on eelkõige administratiivne staatus ja puudub otsene seos demokraatliku mandaatsusega (valijate usalduse ja toetusega). See annab neile institutsioonidele eriti lühiajalises perspektiivis oluliselt suurema otsustusruumi. Antud grupi raames kasutatakse ka mõisteid „liikmesriik“ ja „riiklikud huvid“, arvestades, et riike ja nende huve esindavad siiski poliitlised liidrid, on korrektsem kasutada siiski viimast määratlust.

Majanduslike osalejate grupp sisaldab endas Eurotsooniga seotud ettevõtteid, mis on mõjutatud Eurotsooni majanduskeskkonnast, maksutasemest, tööhõivest ja kaupade-teenuste nõudlusest. Antud osalistele on olulised ka tarbijate majanduslik väljavaade ja intresside tase ning varieerumine. Erinevate majanduslike gruppide väljavaated kriisi lahenduste osas võivad samas oluliselt erineda (Mugge 2011). Pikaajalised investorid ja kasvule orienteerunud ettevõtted pooldavad madalaid intresse, stabiilselt majanduskasvu, madalat maksukoormust, mõõdukat inflatsiooni ja valitsussektori defitsiitset kulutamist (Kregel 1999). Korrektsioone ja kriise nähakse pigem negatiivsetena ning pigem eelistatakse valitsuse stabiliseerivat sekkumist läbi täiendava rahapakkumise, mis ühtaegu tagab majanduskasvu ja mõõdukalt nõrgeneva valuuta, mis omakorda toetab eksporti väljapoole eurotsooni. Kuivõrd majanduslik eliit on peamine poliitilise eliidi finantseerija, toimub nende kahe grupi vahel tihe kommunikatsioon ja huvide kanaliseerimine (Lipset 1959).

Majandusliku eliidi hulgas mängivad olulist rolli ka spekulandid ja lühikeste positsioonide omanikud, kellest esimesed panustavad kiirele lühiajalisele kasvule ja teised üldisele kriisile ja langusele. Mõlema grupi ühishuviks on turu kiire muutumine ja soov et valitsused või rahvusülesed institutsioonid oma sekkumisega neid kõikumisi tsentraalselt ei rahustaks.

Rahvusvahelised finantsinstitutsioonid (Eurotsooni arengutega seoses eelkõige IMF) osalevad otseselt protsessi mõjutamises läbi laenude ja garantiide pakkumise. Nende peamine lühiajaline huvi on turgude stabiliseerimine ja intressitulu teenimine.

4. Mõjugruppide vaheliste jõudude tasakaalu kujunemine Eurotsooni kriisi käigus

Poliitilise jõudude tasakaalu ja otsustusloogika kujunemisel sai Eurotsooni kriisi käigus mõjugruppide summaarse mõjukuse kõrval kaalukeeleks nende võimekus ja soov võimalikult suurt osa oma võimu/mõju ressurssidest kasutada. Eeskätt poliitilise eliidi poolt tunnetati otsustusprotsessis peamise piirava ohuna valijate võimalikku demokraatlikku mandaadi kasutust (valimised, protestid jne), et

vajadusel ebameeldiv poliitiline eliit välja vahetada. Just demokraatliku mandaatsuse madala mõju tõttu osutusid seega praktilises otsustusprotsessis kõige mõjukamateks rahvusülesed institutsioonid (Euroopa Komisjon ja Euroopa Keskpankade Süsteem), kellel otsene sõltuvus valijate hääletusotsustest puudus.

Rahvusülestest institutsioonidest osutus kriisi käigus aktiivseimaks ja mõjukaimaks Euroopa Keskpankade Süsteem (EKPS). Kuigi olles formaalelt piiratud õigusliku mandaadiga hinnastabiilsuse tagamise küsimuses, suutis EKPS protsessi käigus oma *de facto* mandaati laiendada ja saadud lisapädevusi ka edukalt rakendada läbi võlakirjade tugiostude programmide ja lubadustega sekkuda euro kaitseks nii suures ulatuses kui tarvilik. Tulemusena suutis EKPS neile rahvuslike poliitiliste liidrite poolt jäetud komplitseeritud ülesande edukalt täita ja sellega saavutada soodsa positsiooni edaspidiste otsuste kujundamisel teiste peamiste mõjugruppide suhtes.

Liikmesriikide rahvuslikud poliitilised liidrid, esindades küll selgelt formuleeritavaid rahvuslikke huve, olid otsustuste ja vastutamise osas piiratud eelkõige iseenda huvidest lähtuvalt (säilitada populaarsus ja võim). Reeglina sai otsustavaks valijate kõrgendatud tundlikus tööhõive ja sotsiaaltoetusprogrammide suhtes. Valijate huvid said aktiivsemalt esindatud eelkõige Kreekas, Portugalis ja Prantsusmaal, ehk neis riikides, kus valijad oma huvide eest ka aktiivselt seisid. Eurotsooni valijatele kui mõjugrupile oli EKP, ESM-i, EFSM-i ja EFSF-i poolt pakutud täiendava rahapakkumise lubadus peamise kriisilahendusmeetmena siiski üldjoontes soodne, maandades riske, tagades sotsiaalsete hüvede jätkumise ja piirdudes seejuures mõõduka inflatsiooni kasvuga. Tervikuna oli perioodil 2008–2012 tunnetatav valijate teadlikkuse ja huvi kasv nii kriisi põhjuste, mõjude kui vastumeetmete olulisuse osas.

Hoolimata kriisi stabiliseerimisest ootab üks peamisi poliitilisi dilemmasid – tasakaalutus Euroala netoeksportijate (näiteks Saksamaa) ja netoimportijate (näiteks Kreeka) vahel alles lahendamist, vastasel juhul hakkavad esimeste reservid ja teiste võlad ning intressimäärad taas kasvama, luues sellega pinna uue võlakriisi tekkeks.

Kokkuvõte

Käesolev artikli eesmärgiks oli analüüsida, millised teoreetiliselt lahendusvõimalused Eurotsooni kriisi protsessis mõjugruppidel kasutada olid; millised mõjugrupid otsustusprotsessi enim mõjutasid ja ise mõjutatud said ning kuidas toimus mõjukuse osaline üle kandumine rahvuslikelt valitsustelt riikideülestele institutsioonidele.

Lahenduste leidmine on poliitilise ja administratiivse eliidi jaoks olnud mitmete dilemmaliste valikute tõttu keerukas ja aeganõudev, seda enam, et teatud aspektides on ühisraha euro ise olnud osa kriisi põhjustest. 2013 märtsiks on vähemalt lühiajalise maksevõime ja stabiilsuse seisukohalt olnud Eurotsooni poliitika kujundajate tehtud otsused toimivad – valitsuste võlakirjade intressid on tipptasemetaga võrreldes oluliselt alanenud, riikide maksevõime on taastumas ning edasiste reformide puhul lähtutakse juba pikaajalise jätkusuutlikkuse arendamisest. Küprose

panganduskriisi puhkemine osutab siiski, et kriisilahendusmeetmete areng peab jätkuma.

Kriisi lühiajalise ohjamise meetodid (abipaketid, tugiostud ning garantiiprogrammid), samuti ka riikideüleste institutsioonide mõju kasv protsessi käigus olid dilemmade süvaanalüüsil prognoositavad, küll aga oli mõneti üllatuslik Saksamaa ja Prantsusmaa poliitiliste liidrite passiivsus oma huvide realiseerimisel. Analüüs tõi ka välja, et majanduslikult jätkusuutlike otsuste tegemine on kriisi olukorras pigem jõukohane demokraatliku mandaadiga mitte-seotud institutsioonidele, kui rahvuslikele poliitilistele liidritele, kelle võimul püsimine sõltub tehtud otsuste populaarsusest.

Positiivsete aspektide kõrval kriisi lahendamisel toovad lühiajaliste edukuskriteeriumite täitmine ja probleemsete riikide laenuvõimekuse taastamine mõjugruppide jaoks kaasa aga täiendavaid riske ja nii seisab kriisi sisuliste põhjuste kõrvaldamine ja jätkusuutlikku stabiilsuse ning globaalse konkurentsivõime taastamine eurotsooni liikmesriikidel ja institutsioonidel veel ees.

KROONIKA

CHRONIK

CHRONICLE

AKADEEMIK RAIMUND HAGELBERG
(7.02.1927 – 17.07.2012)
IN MEMORIAM

Eesti majandusteaduse ja majanduse ajalukku on Raimund Hagelberg jätnud sügava jälje nii õppejõu, teadlase, nõuniku kui ka koordinaatorina. Ta oli tõsine töömees, kes igat enda poolt ette võetud tööd püüdis ja suutis teha äärmise põhjalikkusega. Seetõttu ei pidanud ta ameteid ja kohustusi otsima, vaid need tulid ise tema juurde.

Raimund Hagelberg sündis 7. veebruaril 1927. aastal Tallinnas töölisperekonnas. Tema noorusaega tumestas sõjakeeris, tema kodu pommitati maatasa ning, relv käes, tuli ka lahingutest osa võtta. Viimast asjaolu pidi ta aastakümneid saladuses hoidma ja alles taasiseseisvunud Eestis sai hakata sellest jälle avalikult rääkima.

1946. aastal lõpetas Raimund Hagelberg hõbemedali vääriliselt Tallinna Reaalkooli ja asus seejärel koos mitme klassivennaga õpinguid jätkama Tallinna Polütehnilises Instituudis majandusteaduse erialal, mille lõpetas väga heade hinnetega 1950. aastal. Ta suunati tööle Põllumajanduspanka, kuid juhendaja professor Juhan Vaabeli poolt välja kaubeldud kokkuleppega, et võib selle asemel ka aspirantuuri minna. Seega pangas ta tööle ei asunudki.

Tallinna Polütehnilise Instituudi (TPI) lõpetamisele järgnes samas aspirantuur rahanduse ja krediidi erialal, mille lõpetamise tulemusena valmis kandidaaditöö põllumajanduse krediteerimise vallas, mille ta kaitses edukalt 1954. aastal. Raimund Hagelbergi rahandussuunaline huvi polnud aga juhuslik. Selleks oli kaks põhjust. Esiteks, TPI esimesel kursusel õppides sattus ta lugema Rootsi majandusteadlase Gunnar Westin. Silverstolpe eesti keelde tõlgitud raamatut „Rahvamajandusteadus kõigile“ (1939), kus selle autor ütles muuhulgas otse välja, et raha ja rahanduse hävitamine oleks sama, mis rahvamajanduse hävitamine. See seisukoht oli risti vastupidine sel ajal Stalini nimel välja pakutud rahavabast kommunistlikust ühiskonnast tulevikus (Hagelberg 2002: 10). Teiseks põhjuseks oli asjaolu, et kolmest õpetatavast kohustuslikust erialast luges rahanduse ja krediidi õppeainet professor Juhan Vaabel, kelle loengud meeldisid noorele tudengile kõige rohkem (Hagelberg 2008: 103). See rahandussuunaline orientatsioon määras suures osas ära ka Raimund Hagelbergi elutöö suuna ja sisu järgneva rohkem kui poole sajandi jooksul.

Statsionaarse aspirantuuri järel suunati Raimund Hagelberg 1953. aastal tööle Eesti NSV Teaduste Akadeemia Majanduse Instituuti. Aga juba 1954. aastal tuli tal Tallinnast Tartusse kolida, et hakata seal taastama nii majandusteaduskonda kui ka nullist üles ehitama rahanduse ja krediidi eriala ning Tartu Riiklik Ülikool (TRÜ) saigi ligi kolmekümneks aastaks tema töökohaks. See periood tema elus oli nii oluline, et ta on Tartu Ülikooli nimetanud ka oma teiseks koduks (Jõgeda 2004: 30).

Kuivõrd ettepanek tulla Tartusse uut eriala üles ehitama tehti talle TRÜ prorektori Ilo Sildmäe poolt just vahetult enne kandidaaditöö kaitsmist, siis väikese kõhklusega ta sellega ka nõustus. Eesti NSV Teaduste Akadeemia Majanduse Instituudist lahkumise vormistamine võttis aega, sest sealt ei tahetud kuidagi noort perspektiivikat teadurit ära lasta. Seetõttu jõudis Raimund Hagelberg Tartusse alles 27. septembril 1954 kui õppetöö oli juba alanud. Ta pidi alustama loengutega kaubanduse eriala üliõpilastele ning samaaegselt tegelema rahanduse ja krediidi suuna õppejõudude otsimisega, kuna esimesed selle eriharu üliõpilased, kellel järgmisest aastast pidid algama erialased loengud, olid juba ülikooli vastu võetud. Lisaks nendele ülesannetele Tartus oli ta lubanud lõpetada ka Majanduse Instituudis pooleli jäänud uurimistöö.

Rahanduse ja krediidi eriala taasasutamist nõudis kõige häälekamalt NSV Liidu Riigipanga Eesti Vabariiklik Kontor. Kuivõrd TPI majanduserialasid, sealhulgas ka seda eriala õpetada ei tahtnud, hakatigi seda looma Tartus. Kuid juba 1963. aastal TPI soovid muutusid ja nad saavutasid selle, et 1964. aasta 28. juunil kirjutati alla valitsuse korraldus liita TRÜ majandusteaduskond TPI-ga. Tartus aga uut kolimist Tallinna ette võtta ei tahetud ja nii moodustas TRÜ rektor komisjoni eesotsas Raimund Hagelbergiga valitsuse otsuse tühistamise taotlemiseks. Komisjon õigustas igati kolleegide ja TRÜ juhtkonna poolt neile pandud ootusi, sest EKP Keskkomitee kaudu saavutatigi valitsuse korralduse muutmine (Tartu Ülikooli …, 2008: 20). Seega on tänu Raimund Hagelbergile majandusteaduste õpetamine alates 1954. aastast Tartu Riiklikus Ülikoolis jätkuvalt olemas.

Kuni 1958. aastani töötas Raimund Hagelberg majandusteaduskonna vanemõpetajana. Aastast 1958 kui moodustati rahanduse ja krediidi kateeder ning olid esimesed selle eriala lõpetajad, asus ta tööle nimetatud kateedri dotsendi ja kateedrijuhatajana. Perioodil 1968 – 1982 töötas ta sealsamas kateedrijuhataja ja professorina. Töö kõrvalt valmis ka doktoriväitekiri „Põllumajandusettevõtete töö majandusliku analüüsi alused“. Raimund Hagelberg pidas seda uurimust ka tagantjärele endale kõige rohkem huvi pakkunud tööks ja oli uhke, et see väitekiri ilmus ka õpikuna, mille järgi on õppinud kõik Eesti Põllumajanduse Akadeemia (EPA) tudengid ja mida põllumajandusjuhid kasutasid ka käsiraamatuna (Jõgeda 2004: 21).

Kuivõrd Raimund Hagelbergi huvi kaldus rohkem teadustöö kui loengute pidamise poole, siis oli ta ka paljude uurimuste ja uute suundade algatajaks ning autoriks nii Tartu Riiklikus Ülikoolis töötamise perioodil kui ka hiljem. Tehes 2002. aasta algul oma seitsmekümne viiest elatud aastast kokkuvõtet märkis ta, et tema sulest on

ilmunud 11 monograafilist uurimust, üks õpik ning 133 teaduslikku artiklit, millele lisanduvad arvukad artiklid ajalehtedes ja muudes väljaannetes. Viljakas kirjutamine jätkus tal ka järgnevatel aastatel, kusjuures tema mahukaim mälestusteraamat ilmus alles 2008. aastal (Hagelberg 2008).

Raimund Hagelberg jaotas 2002. aastal elutööst vahekokkuvõtet tehes oma teadustegevuse viide põhitsüklisse. Seejuures märgib ta, et neid suunavalikuid mõjutasid konkreetse perioodi teaduslik-praktilised tegevused.

Esimeseks suunaks olid uurimused ettevõtete majandusanalüüsi metodoloogia, metoodika ja rakenduste vallas. Selles tsüklis avaldati neli monograafiat, üks õpik, kaks brošüüri ja 27 artiklit. Põhisuunalt olid need valdavalt põllumajandusega seotud. Rõhuasetus oli neis uurimustes tootmise majandusliku efektiivsuse hindamisel. Ta osales kõikides nendes hindamisprotsessides teadusliku tegevuse kõrval ka ise praktilise juhendaja ja konsultandina. Raimund Hagelbergi enda arvates hakkas selle uurimissuuna publikatsioonide ja konsulteerimiste tulemusel ajapikku Eestis välja kujunema põllumajandusjuhtide uus põlvkond ning Eesti põllumajandus suutis väljuda nõukogudeaegsele põllumajandusele üldiselt omasest tasuvuse ja juhtimise kriisist. Teaduslikult vormistusid selle uurimissuuna põhitulemused aga 1967. aastal kaitstud eelpool nimetatud doktoritöös.

Teiseks uurimissuunaks oli rahandusteooria ja ettevõtete rahandus. Selles tsüklis avaldati üks monograafia, 10 brošüüri ja 35 artiklit.[1] Selle suuna monograafia oli rahanduse ja krediidi kateedri õppejõudude kollektiivne looming ja kandis pealkirja „Rahandussuhted kaasajal“ (1975). Õpik oli omast ajast tublisti ees ja käsitles propagandavabalt ettevõtete ja riigi rahandusküsimusi, sealhulgas seda ka kapitalistlikus ühiskonnas. Sellest uurimistsüklist kujunes välja ka TRÜ rahanduse ja krediidi kateedri õppejõudude ühine uurimissuund, mis tõi kaasa uute uurimismeetodite (matemaatilis-statistilised meetodid, süsteemanalüüs jt.) kasutuselevõtu rahandusuuringutes ja TRÜ tunnistati selle suuna juhtivaks ülikooliks tollases Nõukogude Liidus.

Kolmas uurimisvaldkond oli haridus, teadus ja kõrgkooli ökonoomika. Selles valdkonnas avaldati kolm monograafiat, üks brošüür ja 32 artiklit. Selle tsükli uuringutel oli rahvusvaheline iseloom, mida põhjustas kogu maailmas kasvanud arusaam teaduse ja hariduse suurenevast rollist ühiskonna arengus. Selles valdkonnas tehti koostööd Soome teadusasutuste ja kõrgkoolidega, Moskva ja Kaasani ülikoolidega ning NSV Liidu Teaduste Akadeemiaga. Otsene praktiline väljund oli selles, et Raimund Hagelberg kutsuti Eesti NSV Kõrg- ja Keskerihariduse ministri konsultandiks ning ta osales TRÜ arengukava koostamises, aga ka teiste ülikoolide arengukavade konsulteerimisel. See oli ka üheks põhjuseks, miks talle omistati 1973. aastal Tartu Riikliku Ülikooli medal.

[1] Raimund Hagelberg luges ülikoolis ise ka põhiliselt ettevõtete rahanduse kursust (õppeainet).

Neljandaks suunaks oli majandusteooria, kus avaldati üks monograafia, üks leksikon, üks brošüür ja seitse artiklit. Tsükli eripäraks oli erinevus nõukogude majandusteadusele omasest traditsioonilisest käsitlusest. Selle suuna uuringute materjalid leidsid aktiivset kasutamist juba sotsialistliku majandusmudeli oludes *Perestroika* mõjul reformimist alustatud majandushariduse süsteemis. Majandusteadlaste „piibliks" kujunes kohe pärast ilmumist selle tsükli põhiteosena ilmunud professor Uno Mereste poolt koostatud leksikon „Majandusteaduse ABC" (1985), kus Raimund Hagelberg ühe olulisema autorina[2] oli hinnanguliselt kirjutanud veerandi ehk kuus peatükki 24-st. Leksikoni populaarsus Eestis jätkus ka turumajandusele ülemineku perioodil.

Viimaseks, viiendaks uurimissuunaks, seda ka ajaliselt, olid uurimused rahast, pangandusest, krediidist ja nendega seotud makromajanduslikest probleemidest Eestis uuenenud, turumajanduslikes tingimustes. Selles tsüklis avaldati kaks monograafiat ja 32 artiklit. Selle suunaga oli tihedalt seotud ka Raimund Hagelbergi osalemine seadusandlike aktide eelnõude ettevalmistamisel, kehtestatud seadusaktide toime analüüsimisel ja hindamisel nii Eesti Teaduste Akadeemia eksperdina, Eesti Vabariigi Ülemnõukogu esimehe nõunikuna, Eesti Vabariigi Presidendi Akadeemilise Nõukogu liikmena kui ka Eesti Panga nõunikuna.

Eeltoodust näeme, et Raimund Hagelbergi uurimisvaldkondade ampluaa oli väga lai, mistõttu kui Tartu periood 1982. aastal lõppes (tegelikult kestis tal mõningate õppeülesannete täitmine 1984. aastani), olid tal käed-jalad ikkagi kogu aeg tööd täis. Aga Tartu perioodi iseloomustuseks veel niipalju, et rahanduse ja krediidi kateeder oli just see kateeder TRÜ majandusteaduskonnas, kus kaitsti juba nõukogude perioodil kõige rohkem majandusdoktori kraade (Heino Siigur, Vambola Raudsepp, Elvi Ulst ja Mart Sõrg). Seega ei olnud Raimund Hagelberg üksnes ise andunud teadlane, vaid ka selline teadlase eeskuju, kes süstis samuti oma kolleegidesse sügavat kiindumust teadustöö vastu. Seega oli täiesti õigustatud temale 1979. aastal Eesti NSV teenelise teadlase aunimetuse omistamine.

Raimund Hagelberg püüdis lektorina olla äärmiselt põhjalik ja täpne. Seetõttu ei peetud teda küll kuldsuuks, aga selliseks õppejõuks, kelle loengutest katsuti mitte puududa. Tema õpilane Siim Kallas on meenutanud, et seetõttu austasid üliõpilased Raimund Hagelbergi väga. Ta meenutab, et õppeaines „Ettevõtete ja rahvamajandusharude rahandus" suhtus Raimund Hagelberg üliõpilaste kohalkäimisse kaunis ükskõikselt. Kuid tudengitele oli niigi selge, et sellist materjali, nagu neilt loengutelt, nad kusagilt mujalt ei saa. Seetõttu ka suur osa õpetatust jäi neile alatiseks meelde. Õppejõud lahkas selle aine raames tegelikult asju, mida tänapäeval mõistetakse seostena sisemajanduse koguprodukti erinevate osade vahel, neid arvudega rikastades (Hagelberg 2008: 8). Seetõttu pole ka üllatus, et teenete eest Tartu Ülikooli ees, otsustati Raimund Hagelberg nimetada 1995. aastal TÜ emeriitprofessoriks, kuigi tema lahkumisest Tallinna oli möödunud kõvasti üle kümne aasta.

[2] Leksikonil oli kokku 15 autorit.

Kuivõrd ka teised rahanduse ja krediidi kateedri õppejõud püüdsid kateedrijuhataja eeskujul oma loengutes ja õppevahendites probleemide põhjuste juurteni jõudmise stiili järgida, olid rahanduse ja krediidi eriharu parimad lõpetajad Eestis majandusmudeli muutumise siirdeperioodil kohe valmis asuma uue süsteemi juurutajate esiridadesse. Rahanduse ja krediidi suunaga majandusharidusega inimesi oli ette valmistatud tema Tartust lahkumise ajaks kokku juba 1741. Nii nagu õpilased olid uhked tema õpilasteks oleku üle, oli ka Raimund Hagelberg ise uhke oma edukamate, see tähendab Eestis tippu jõudnud õpilaste üle, millele ta on mitmelgi jutuajamisel vahel nimesid nimetades, vahel mitte, ikka ja jälle viidanud. Mälestusteraamatus „Elust ja endast" nimetab ta tähestiku järjekorras 10 oma parima õpilase nime, keda enamik eestimaalasi ka teab. Tema valiku aluseks oli kaks tunnust: silmapaistvus loominguliselt mõtlevate isiksustena õpingute ajal ja õpilase enda jäädvustamine silmapaistvate tegudega tänases Eestis. Nendeks nimedeks olid Siim Kallas, Vahur Kraft, Andres Lipstok, Heldur Meerits, Rein Miller, Ivi Proos, Olev Raju, Mart Sõrg, Ants Veetõusme ja Meelis Virkebau. Oma mälestusteraamatus oli ta uhke ka selle üle, et tütar Maris hakkas oma kõrgharidust omandama just rahanduse ja krediidi erialal ja töötab TÜ majandusteaduskonnas siiamaani (Hagelberg 2008: 168). Käbi ei kuku kännust kaugele.

Tulenevalt Raimund Hagelbergi teadlase kõrgest renomeest valiti ta 1981. aastal Eesti Teaduste Akadeemia akadeemikuks majandusteaduse alal ja aasta hiljem Eesti NSV Teaduste Akadeemia Presiidiumi teaduslikuks peasekretäriks. Siitpeale algas jälle tema Tallinna tööperiood, mis kestis praktiliselt kuni elu lõpuni. Teaduste Akadeemia peasekretäri ametit vastu võttes oli tal tema enda sõnade järgi uue väljakutse kõrval ka mitu muud töövälist põhjust. Kõigepealt muidugi moraalne kohustus akadeemia kui TPI lõpetamise järgse esimese töökoha ees. Teiseks tunne, et TRÜ majandusteaduskonnale ja selle rahanduse ja krediidi kateedrile võiks tulla kasuks uuem ja rutiinivabam lähenemine, seega kateedrijuhataja vahetus. Oma osa etendasid ka perekondlikud asjaolud. Tema ema ja kasuisa, samuti abikaasa ema, kes elasid Tallinnas, vajasid oma kõrge ea ja tervisliku seisundi tõttu lähedastelt inimestelt järjest suuremat tuge, mida Tartus töötamist jätkates oleks raske olnud korraldada (Hagelberg 2008: 157).

Raimund Hagelbergi akadeemia-periood kestis tervelt seitse aastat. Mälestustes ei pea ta seda küll oma parimaks tööperioodiks, sest liiga palju oli mõttetut bürokraatiat ja vajadust Akadeemia peret ja huve nii Moskva kui ka Tallinna võimuorganite eest kaitsta. Seetõttu jäi liiga vähe aega ka puhta teadusega tegelemiseks. Siiski tuli ta nende akadeemia ülesannetega piisavalt hästi ja ilma suuremate probleemideta toime ja 1987. aastal, kui ta oli saanud 60- aastaseks, omistati talle Eesti NSV Teaduste Akadeemia medal. Küll ei tahetud Akadeemiast teda aga pensionile lasta, kuigi ta paar aastat peale pensioniea saabumist sellekohase avalduse esitas. 1989. aastal alanud pensionipõlve jätkus siiski ainult pooleks aastaks, sest peagi tuli kutse asuda tööle majandusnõunikuna Eesti NSV Ülemnõukogu Presiidiumi esimehe Arnold Rüütli meeskonda.

Raimund Hagelberg hindab oma mälestusteraamatus „Elust ja endast“ oma Kadrioru ja sellele järgnenud perioodi Eestile kõige kasulikumaks. Ta kirjutab sellest kujundlikult: „Päris õigele töisele rajale meie riigi ja rahva hüvanguks sain ma, nagu paljud teisedki minuvanused, asuda alles pensionieas. Mahajäämus stardis ja poole sajandi pikkuse distantsi läbimine teistsugustes tingimustes tuli nüüd püüda tasa teha lõpukiirendusega. Tõeline, Eesti elu edasiviimisele suunatud lõpuspurt algas minu sisetunde järgi siis, kui Eesti NSV Ülemnõukogu esimees Arnold Rüütel kutsus mind meie elu pöördelistel päevadel enda nõunikuks“ (Hagelberg 2008: 161). Tema oligi Kadriorus esimene majandusnõunik. Raimund Hagelberg meenutab, et tähelepanu keskmes olid sel ajal majandusprobleemid ja riigi rahaasjad.

Kuid „Eesti asja“ ajamine ei piirdunud Raimund Hagelbergil üksnes Kadrioruga. Perioodil 1987-1993. oli ta ka taasasutatud Eesti Majandusteadlaste Seltsi juhatuse esimees. See oli sellel seltsil eriti tuliste vaidluste periood, kus Eesti majandusteadlaste isamaaliselt meelestatud tiib otsis ajurünnakutel vastuseid küsimustele, kuidas sotsialismilt valutumalt tagasi turumajandusele minna ja kuidas pärast lahkumist Nõukogude Liidu majandusruumist majanduslikult ka ellu jääda. Selle perioodi alguse märksõnadeks oli ka Isemajandava Eesti (IME) programm, mille kohta Raimund Hagelberg mitmel puhul nii aruteludel kui ka kirjalikult sõna võttis. Need tema seisukohavõtud olid ikka teadlase, mitte poliitiku stiilis kirjutatud või välja öeldud ning juhtisid lisaks positiivsetele aspektidele tähelepanu ka ümberkorraldustega kaasnevatele võimalikele riskidele, mistõttu teinekord kõige tulisemad IME pooldajad ei tahtnud teda mõista.. Kuid tagantjärele ka aastaid hiljem ei kahetsenud Raimund Hagelberg neid kriitilisi kirjutisi ja sõnavõtte ning leidis jätkuvalt, et tema seisukohad olidki õiged (Jõgeda 2004: 24).

Ühel või teisel viisil puutus Raimund Hagelberg lisaks majandusküsimustele kokku kõigega, mis neil päevil Kadriorus toimus. Kui 1990. aasta jaanuarist alustas tööd Eesti Pank (EP) ja Raimund Hagelberg kinnitati selle viieliikmelise nõukogu liikmeks, siis sellega algas tema enda sõnade järgi ka päris pikalt kestnud töine finaal Eesti Pangas. Raimund Hagelberg oli Eesti Panga Nõukogu kolme esimese koosseisu liige. Seega kestis tema nõukogu liikmeks oleku periood kaheksa aastat. Tähelepanuväärne on seejuures fakt, et kuigi tulenevalt seadusmuudatustest EP nõukogu koosseisud vahetusid, aga tema allesjäämist uude koosseisu peeti ikka alati vajalikuks. Sellesse ajaperioodi, mil Raimund Hagelberg oli Eesti Panga nõukogu liige, jäi ka Eesti rahareform ja kaks panganduskriisi, kus nii elukogenud rahandusteadlase tarkust kui ka tulevikunägemusi asendamatuteks peeti.

Kuigi ta polnud Eesti Rahareformi Komitee ametlik liige, olid tema teened selle ettevalmistamisel ja läbiviimisel märkimisväärsed. Tema oli üks välismaale talletatud Eesti kullavarude ülesotsija, samuti rahareformi kontseptsiooni üks põhiautoreid. Seetõttu pole ime, et 1992. aastal emiteeritud kuuel eri nominaaliga pangatähel on lisaks Eesti Panga presidendi ja ühtlasi nõukogu esimehe allkirjale ka Raimund Hagelbergi, kui nõukogu liikme, allkiri. Eesti Panga patrioodina algatas ta ka selle, kui riigi ühe alustala, ajaloo uurimise, mille tulemusena valmiski 1999. aastal mahukas publikatsioon (Eesti Pank …, 1999). Ka oma arhiivi, kus olid nii

tema teadustööd kui ka projektid ja mustandid pangatöö perioodist andis ta Eesti Panga muuseumile. Seega on nii Eesti finantssüsteemi kujunemise ajaloo kui ka tema loomingu uurijatel võimalus tulevikus lisaks tema publikatsioonidele jälgida ja uurida tema mõttekäigu arengut ka arhiivimaterjalide põhjal.

1998. aastal, pärast Uno Mereste volituste lõppemist, tegi Eesti Vabariigi president Lennart Meri ettepaneku Riigikogule, et Eesti Panga nõukogu esimehe kohale võiks kandideerida Raimund Hagelberg. Sellega seoses kirjutas Riigikogu liige akadeemik Uno Mereste hiljem, et Hagelberg oli kaheldamatult meie selle aja parim rahandusteadlane (Mereste 2008: 512). Kuid vaatamata selle kandideerimise läbikukkumisele Riigikogus, keelitati teda koostööd Eesti Pangaga jätkama nõunikuna. Ka enne seda Eesti Panga nõukogu liikmena oli ta juba töötanud nõukogu liikme palgalisel ametikohal istudes iga päev Eesti Panga ruumides oma töölaua taga. See periood oli Eestis väga intensiivne seadusloome periood, kus valmistati ette põhiline osa Eesti finantsmaastiku tegevust kujundavaid ja reguleerivaid seadusakte. Nende projektide algatamise ja koostamise üheks võtmeisikuks oli tihti just Raimund Hagelberg. Leiti, et tema kogemused ja analüüsioskus on üha arenevale keskpangale veel äärmiselt ebastabiilsel pangandusmaastikul väga vajalikud ehk kulla hinnaga. Nõuniku kohal töötas ta elu lõpuni, kuigi põhimõttekindla inimesena loobus ta hiljem selle kohaga kaasnevast töötasust.

Teenete eest Eesti riigi ülesehitamisel sai Raimund Hagelberg 2000. aastal Riigivapi teenetemärgi III klassi medali. Aasta varem oli talle määratud aga Eesti Panga teenetepension. Ta oli esimene Eesti Panga töötaja, kes selle sai. Eesti Panga nõukogu vastavas otsuses märgitakse, et see on teenete eest Eesti Panga taastamisel, rahareformi läbiviimisel ja pikaajalise tegevuse eest EP nõukogu liikmena.

Raimund Hagelberg, lisaks oma põhimõttekindlusele kodanikuna ja teadlase hingele, oli ka tervislike eluviisidega, mis oli ilmselt tema pika eluea üks tegureid. Tartu perioodil käis ta regulaarselt kuulsas Uno Sahva õppejõudude võimlemisrühmas ja vedas kolleegegi sinna kaasa. Ta tegi kuni kõrge eani korralikult hommikuvõimlemist ja järgis täpselt arstide nõuandeid, millega püüdis end ka kõrges eas tervena ja töövõimelisena hoida. Ta jõudis veel sõprade ja ekskolleegide seltsis Tartus oma 85. sünnipäeva tähistada. Raimund Hagelbergi elutee lõppes 17. juulil 2012.

Raimund Hagelberg oli teadlasena kuni elu lõpuni aktiivne. Tema lõpuspurt Eesti hüvanguks kestis kaugelt üle 20 aasta. Tema õpetused elavad aga kindlasti tema enda tööde kaudu ja ka õpilastes ikka edasi.

Kasutatud allikad

1. Eesti Pank 1939 – 1999. Tallinn: Rahva Raamat, 1999, 151 lk.
2. **Hagelberg, R.** Elust ja endast. Tartu: Eesti Kirjandusmuuseum , 2008, 187 lk.
3. **Hagelberg, R.** Raha meie elus. Tallinn: Eesti Pank, 2002, 72 lk.

4. **Hagelberg, R., Siigur, H. ja Ulst, E.** Rahandussuhted kaasajal. Tallinn: Valgus, 1975, 331 lk.
5. **Jõgeda, T.** Kapital. Tartu Ülikooli Majandusteaduskond. Arengulood. Tartu: Tänapäev, 2004, 255 lk.
6. Majanduse ABC: Majandusleksikon kõigile. Koostanud prof. Uno Mereste. Tallinn: Eesti Raamat, 1985, 512 lk.
7. **Mereste, U.** Riigikogu ja Eesti Panga aastad. Tallinn: Kirjastus SE&JS, 2008, 775 lk.
8. **Silverstolpe, G.W.** Rahvamajandusteadus kõigile. Tartu: Elav Teadus nr. 94/95, 10. nov. 1939, 208 lk.
9. Tartu Ülikooli majandusteaduskond 70/40. Tartu: Tartu Ülikooli Kirjastus, 2008, 277 lk.

Märts 2013

Mart Sõrg
Tema õpilane ja kolleeg

AKADEMIKER, PROFESSOR RAIMUND HAGELBERG
(7.02.1927 – 17.07.2012)
IN MEMORIAM

Raimund Hagelberg hat seinen Platz, als renommierter Universitätslektor, Wissenschaftler, Ratgeber und Koordinator, in der estnischen Wirtschaftsgeschichte gesichert. Er war ein fleißiger Mann, der, für mehr als ein halbes Jahrhundert, sehr gründlich und konsequent allen seinen Beschäftigungen nachging.

Nach dem Abschluss des Polytechnischen Instituts in Tallinn (heute die technische Universität Tallinn) auf dem Gebiet Finanz- und Kreditwesen in 1950, hat er mit seinem Aufbaustudium angefangen. In 1954 verteidigte er erfolgreich sein Ph.D. Thesis über Kreditierung der landwirtschaftlichen Betriebe. Nach dem Aufbaustudium wurde er zugeteilt bei der Wirtschaftsinstitut der Akademie der Wissenschaften der Estnischen SSR zu arbeiten. Sehr bald danach, schon in demselben Jahr, wurde er zu der Universität Tartu berufen um die Wirtschaftsfakultät wieder zu gründen und damit auch die Abteilung der Finanz- und Kreditwesen.

Die Arbeit von Raimund Hagelberg hat sich über 30 Jahren fortgesetzt, er hat die Universität Tartu sein zweites Zuhause genannt. In dieser Zeit in Tartu, hat er sich von dem Posten der Seniorlektor zu dem Assistenz-Professor (1958) hochgearbeitet und ab 1968 dann zum Professor. In 1967 verteidigte er seine Dissertation über "Die Grundlagen der Analyse der Handel der landwirtschaftlichen Betriebe". Diese Dissertation wurde auch als Lehrbuch veröffentlicht und sowohl Studenten als auch Landwirte haben dieses Buch benutzt um die wissenschaftlichen Methoden in die Analyse der Landwirtschaftssektor einzuführen.

Seine wissenschaftliche Tätigkeit bezog sich auf fünf Gebieten der Wirtschaftswissenschaften: Wirtschaftsanalyse, die Methodologie und die Methoden; Finanztheorie und Unternehmensfinanzen; Bildung und die Wirtschaft der höherer Bildung; Wirtschaftstheorie; und zum Schluss, Forschung in dem Gebiet Geld, Bankwesen und Kreditwesen. In 2002, hat Raimund Hagelberg zusammengezählt, dass er Autor oder Mitautor von 11 Monographien, einem Lehrbuch, und 133 wissenschaftlichen Schriften ist. Zusätzlich hat er unzählbare Artikel in der estnischen Presse veröffentlicht.

In 1981 wurde Raimund Hagelberg Akademiker bei der Akademie der Wissenschaften und ein Jahr später übernahm er die Position des Generalsekretärs der Akademie, die er bis seinem Ruhestand sieben Jahren später besetzte. Jedoch wurde er nur ein halbes Jahr später zurückgerufen, diesmal als Ratgeber bei dem Team der Vorsitzenden des Präsidiums des Obersten Sowjets Estnischer SSR. In 1990 wurde er in den Vorstand der wiedereröffneten Zentralbank – die Estnische Bank, gewählt. Er arbeitete dort für 8 Jahren als Vorstandsmitglied und danach als Ratgeber bei der Zentralbank. Er findet, dass diese Periode der Endspurt seiner

Karriere war und in seiner Meinung, hat er versucht in dieser Zeit viel mehr für Estland zu tun als zuvor.

Professor Raimund Hagelberg war seit 1979 ein angesehener estnischer Wissenschaftler. In 1995 wurde er mit dem Titel Professor Emeritus der Universität Tartu geehrt und in 2002 mit dem Orden des Staatswappens. Er ist im letzten Jahr von uns gegangen, jedoch durch seine Werke und seine fast anderthalb tausend Studenten bleibt er bei uns.

März 2013

Mart Sõrg
Sein Student und Kollege

ACADEMIAN, PROFESSOR RAIMUND HAGELBERG
(7.02.1927 – 17.07.2012)
IN MEMORIAM

Raimund Hagelberg has secured an essential place in the history of Estonian economy as a precious university lecturer, scientist, advisor and coordinator. He was a hard working man, who, for more than half of a century, was very thorough in everything he did. By doing that, duties and tasks themselves automatically looked for him and found him as well.

After graduating from the Tallinn Polytechnical Institute (now Tallinn University of Technology) in 1950 in the field of finance and credit, he undertook the post-graduate course and in 1954 successfully defended his Ph.D. thesis on the topic of crediting agricultural farms. After the post-graduate course he was appointed to work in the Institute of Economics of Academy of Sciences Estonian SSR. But very soon afterwards, during the same year in fact, he was relocated to Tartu State University in order to re-establish the Faculty of Economics and the speciality of finance and credit in this faculty.

Raimund Hagelberg's job in Tartu lasted for nearly 30 years, he has called the University of Tartu as his second home. During this period in Tartu he advanced from the post of senior lecturer to the status of assistant professor (1958) and from 1968 onward he started to work as a full professor. In 1967 he defended his doctoral thesis "The Basics of the Analysis of the Business of Agricultural Enterprises". This work was also published as a textbook and students and practitioners of agricultural farms used it for introducing scientific methods in the analysis of the agricultural sector.

His scientific production was on the five fields of economic sciences. These were: economic analysis methodology and methods; theory of finance and corporate finance; education and the economics of higher education; economics theory and finally, researches in the field of money, banking and credit matters. In 2002, Raimund Hagelberg calculated that he was the author or co-author of 11 monographs, one textbook, and 133 scientific papers. In addition, he had published numerous articles in Estonian press.

In 1981 Raimund Hagelberg became a academian at the Academy of Sciences of Estonian SSR and a year later as a Secretary General of this Academy. He worked at this post for seven years until his retirement. However, after only half of the year he was called back to work, this time as the advisor in the team of the Chairman of the Presidium of the Supreme Council of Estonian SSR. In 1990 he was elected as a member to the Board of reopened central bank – Bank of Estonia. He worked there for 8 years as a board member and after continuously as advised the Bank of Estonia. It was during this period from 1990, which he identified as the final spurt in his career, and in his opinion, it was then that he sought to do much more for Estonia than he had before.

Professor Raimund Hagelberg was an honoured scientist of Estonia from 1979 onwards. In 1995 he was awarded the status of Professor Emeritus of University of Tartu and in 2000 he was decorated with the Order of National Coat of Arms. He passed away last year but he is still surviving amongst us in the course of his works and through all of his almost one and a half thousand students.

March 2013

Mart Sõrg
His student and colleague

MATTIMAR OÜ – KAKSKÜMMEND TEGEVUSAASTAT

Kahekümneaastase tegevusperioodiga firma Mattimar on registreeritud esmakordselt Tallinna Linnavalitsuse Ettevõtluse osakonnas 12. oktoobril 1993 aktsiaseltsina. Vastavalt Eesti Vabariigi Äriseadustikule, mis hakkas kehtima 1. septembrist 1995, toimus ettevõtete ümberregistreerimine ning Mattimar jätkas edasist tegevust osaühinguna. Firma asutajaks ja ainuomanikuks on olnud Matti Raudjärv, nimi Mattimar on tuletatud asutaja eesnime ning tema 1975. aastal sündinud tütre Mari-Liis eesnime kombinatsioonist. Ettevõtet Mattimar võib käsitleda kui mikroettevõtet, mille asutamise põhjuseks ja ajendiks oli vajadus operatiivselt tegutseda ning bürokraatiata asjaajamine teaduskonverentside korraldamisel, millele lisandusid ka mitmed teised, sageli täiendavad tegevused (kirjastamine, täiendkoolitus, majanduskonsultatsioonid, aga ka metsandus jms).

Majanduspoliitika alaste teaduskonverentside korraldamine sai uue hoo just 1993. aasta sügisel,[1] kuna paljud kolleegid Eesti kõrgkoolidest ning teadusasutustest soovitasid järjepidevalt ja tungivalt 1994. aastal järjekordne teaduskonverents korraldada, kuna siis täitunuks kümme aastat algselt allakirjutanu initsiatiivil korraldatud kolmepäevasest nn „laevakonverentsist" Tartu Jõesadamas baseerunud mootorlaeval „Vanemuine" marsruudil Tartu-Värska-Pihkva-Värska-Tartu. Esimese konverentsi avaplenaaristung toimus 24. mail 1984 tänases Tartu Ülikooli Ajaloomuuseumi ruumides Toomel. Kolme sektisooni istungid viidi läbi mööda Emajõge, Peipsi järve, Lämmijärve, Pihkva järve ning Velikaja jõge sõitvas laevas ning osalejate majutus ja lõpp-plenaaristung Värska laagri[2,3] hoonetes. Kuna

[1] Siit ka kõige vahetum seos firma Mattimar asutamiseks.

[2] Värska laager, täieliku nimega *Eesti Vabariigi Kaitseväe Petseri Põhjalaager* asutati 1926. aastal kindral Nikolai Reegi eestvõttel. 45 miljonit senti maksva laagri jaoks saadi riigieelarvest ainult 5 miljonit. Materjal saadi oma metsast, töötas laualõikus, oli tislerikoda, kus valmistati aknaid-uksi. Töölisteks olid sõdurid ise, juhtisid palgatud meistrid. Igal aastal ehitati midagi juurde. Aastaks 1930 olid valmis kasarmud sõduritele, staabihoone, elamud ohvitseride perekondadele, laagriülemale ja komandandile, pagaritöökoda, pood, 500-kohaline kasiino ja söökla ning muud abihooned. Järve vastaskaldale ehitati kasarmud suurtükiväelastele, tallid ja puutöökoda, kus muu hulgas ka sõjaväelastele suuski valmistati. Värska laagris teenisid jala-, ratsa-, suurtükiväelased jt üle Eesti. Sõdurpoiste, sõja- ja reisilaevade, praamide tulek kevadel tõi kaasa elevuse ning kohalikele teenimisvõimaluse, inimeste arv Värskas mitmekordistus. Siin toimusid ratsaväe-ohvitseride kahekuulised kursused, reservohvitseride täienduskoolitused jne. 1941. aastal põhjalaager likvideeriti. Enamik ohvitsere arreteeriti Petseris 1941. aastal ning saadeti NSVL vangilaagritesse. Paljud ohvitserid surid või lasti maha. Põhjalaagri likvideerimisel lammutati paljud hooned. Petseri põhjalaagri endisele lipuväljakule on tänaseks ehitatud laululava ja spordiplatsile Seto Talumuuseum (Värska laager – Petseri Põhjalaager.[http://www.setomaa.ee] 16.03.2013. Lisaks Põhjalaagrile on olemas ka Lõunalaager (loe ka järgmist allviidet).

[3] *Eesti Vabariigi Kaitseväe Petseri Lõunalaager*. Milline on selle koha taust? Peale Vabadussõja lõppu ostis Eesti Vabariigi kaitseväegi külakogukondadelt ja talumeestelt kokku kümneid ruutkilomeetreid maid ning rajati kaks välilaagrit: Värskasse Põhjalaager ning Voropi ja Rääptsuva küla maadele Lõunalaager. Teid pidi on nende vahemaa pea 20 km. Sektoriteks jaotatud künklik, ojadest ja soodest lõhestatud maastik (praegune Mustoja kaitseala) pakkus sõjaväemanöövrite läbiviimiseks tänuväärseid võimalusi. Petseri jaamas seisvad soomusrongid

toimunud konverentsi hinnati osalejate poolt igati kordaläinuks, siis sellest ka paljude osalejate soov selle kordamiseks kümme aastat hiljem. Mõeldud, kolleegide kaasabil ettevalmistatud ning teine konverents toimuski Tartus-Värskas 27. ja 28. mail 1994 teemal „Majandusteadus ja majanduspoliitika Eesti Vabariigis“. Tõsi, laeva „Vanemuine“ enam konverentsitööks kasutada ei saanud, sest see oli amortiseerinud ning sõidukõlbmatu[4].

Kuna ka 1994. aasta konverents õnnestus, siis kolleegide toetusel otsustati nende konverentsidega igal aastal jätkata.[5] Konverentsi temaatiliseks valdkonnaks oli teadlikult valitud majanduspoliitika kui rakendusmajandusteadus ja rahvamajandusõpetuse osa, sest allakirjutanu oli 1989. aasta oktoobri lõpust kuni 1990. aasta jaanuari lõpuni just majanduspoliitika teemadel stažeerinud Saksamaa

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ja kahurvägi sai harjutada laskmist polügooni tulealadele. Sealt süttinud metsast sai alguse ka Lutepää liiviku areng. Kuni 1940. aastani oli laager ka seltsielu keskpunkt, sest õhtust rivistust vaatama ja hilisemaks tantsuõhtuks kogunes pealtvaatajaid ja lõbutsejaid nii ümberkaudsetest küladest kui ka Petseri linnast. Heakorrastatud, paisjärve ja kaarsildadega, nägusa arhitektuuriga ohvitseride küla, ehk "Siidisukk", oli eeskujuks ümbruskonna rahvale. Peale "rahvavõimu" ehk okupatsiooniaja saabumist Eestisse, küüditati 263 ohvitseri "täiendõppuste" sildi all Siberisse ning okupatsiooniaastatel käis laager Saksa ja Nõukogude vägede vahel käest-kätte kuni sõja järel 1950. aastate lõpus lasti lõplikult laguneda. Veel 1990. aastal viidi siin läbi Nõukogude armee õppusi. Kontrolljoone kehtestamise järel on valitsenud siin aastakümneid vaikus, kuni Toomas Valgu (Seto Kuningriigi parim pillimees aastatel 2006, 2008 ja 2010) eestvõttel ja RMK rahastamisel rajati siia laagrielu tutvustav rada. On vähe kohti, kus piiri peal olek oleks nii tuntav kui siin, Voropi küla lähistel Setomaal. Seda nii otseses kui ka kaudses tähenduses. Ühest küljest on Vene piirini siin napilt 400 meetrit ning kuulda on Petseri linnakära, teisest küljest õhkub loodusesse kasvanud laagrivaremetest ühtaegu nii romantikat kui ka traagikat. Rajatud matkarada on hästi tähistatud, eksimisvõimalust pole. Kohe esimese 100 meetri läbimise järel leiate end paisjärve ääres, nägusalt lõkkeplatsilt. Siin võib teha väikese uudistamispausi ning seejärel ringiga edasi liikuda (Kauge aja järelkaja. Petseri Lõunalaagri matkarada. [http//www.matkajuht.ee] 16.03.2013). Matkaraja pikkus on ca 2 km.

[4] Laevapardal konverentsitööd Emajõe-Peipsi vetel sõidukõlbliku laeva puudumise tõttu pole tänaseni õnnestunud teha. Kuigi mõnel korral üheksakümnendatel aastatel sõideti küll kas Tartust Värskasse või Värskast tagasi Tartusse laevaga, kuid need laevad ei sobinud konverentsitööks.

[5] Kolmas konverents toimus 25. ja 26. augustil 1995 Värskas (varasema mai kuu asemel just augustis, kuna otsiti õppejõududele seoses õppetööga sobivat aega) teemal „Majanduspoliitika teooria ja praktika Eesti Vabariigis“. Kuna ka august ei olnud kõige sobivam, siis neljas konverents toimus (ikka sobiva aja otsingul) 28.-29.juunil 1996 pärast eestlaste rahvuspüha Jaanipäeva. Neljandal, rahvusvahelisel konverentsil teemal „Aktuaalsed majanduspoliitika küsimused Euroopa Liidu riikides ja Eesti Vabariigis“, osalesid juba kolleegid ka Saksamaa Liitvabariigi kõrgkoolidest. Järgmine, viies konverents teemal „Eesti Vabariigi majanduspoliitika ja integreerumine Euroopa Liiduga“, otsustati viia läbi kolmepäevasena pärast Jaanipäeva järgneval neljapäeval-reedel-laupäeval. Seda põhjusel, et juuni lõpp (ka juuli algus) osutus parimaks läbiviimise ajaks (õppetöö lõppenud ja puhkuserahad käes) ning soov nii väliskülalistele kui ka eesti kolleegidele anda parem võimalus lisaks konverentsitööle ka eesti kultuuri ja loodusega tutvuda. Selline aeg – pärast Jaanipäeva esimesest neljapäevast laupäevani – on traditsiooniliselt tänaseni (loodetavasti ka edaspidi) parimaks osutunud. NB! Kõigi toimunud konverentside temaatika on esitatud nii eesti, saksa kui inglise keeles käesoleva ajakirja lõpus.

Liitvabariigi ülikoolides Kielis ja Frankfurdis (Main) nimekate saksa professorite juures. Kuna stažeerimise perioodil õnnestus paljude saksa kolleegidega head erialaliselt sisulised kontaktid luua, siis 1996. aasta teaduskonverents oli juba rahvusvaheline ning sellest võtsid osa mitmed saksa ülikoolide professoreid. Konverentsi jätkamist just rahvusvahelisena toetasid mitmed kolleegid Tallinna Tehnikaülikooli majandusteaduskonnast ja Tartu Ülikooli majandusteaduskonnast, kes ise olid pikemat aega Saksamaa Liitvabariigi ülikoolides stažeerinud. Konverentsi töökeelteks valiti eesti ja saksa keel, seda nii stažeerimiste ja loodud kontaktide põhjal saadud kogemustele tuginedes kui ka sel põhjusel, et kõige kompleksem, süsteemsem ja paljudes ühes monograafias asuvates majanduspoliitika küsimused on tänaseni avaldatud just saksa keelses kirjanduses.

Toeks konverentside korraldamisel oli ka asjaolu, et pärast viibimist saksa ülikoolides viidi allakirjutanu initsiatiivil Tallinna Tehnikaülikooli (TTÜ) majandusteaduskonnas 1990. aastal esmakordselt Eestis katseliselt õppekavasse „Majanduspoliitika aluste“ aine õpetamine üliõpilastele. Asjad sujusid ning 1992. aastal kui toimusid ulatuslikud ümberkorraldused Eesti kõrgkoolides, moodustati allakirjutanu initsiatiivil TTÜ majandusteaduskonnas esimene majanduspoliitika õppetool Eestis ning allakirjutanu valiti selle esimeseks juhatajaks ning professoriks. Üliõpilastega õppetöö kõrvalt oli allakirjutanul võimalus ka majanduspoliitika alaseid loengutsükleid pidada nii ettevõtetes-organisatsioonides kui Juhtide Kvalifikatsiooni Tõstmise Instituudis (hilisem Haldusjuhtimise Instituut). Seda tegevust toetas ja lihtsustas firma Mattimar olemasolu ning majanduspoliitika teaduskonverentside eel Mattimar OÜ poolt publitseeritud mahukate konverentsikogumike kirjastamine, mida oli võimalik kuulajatele ka täiendavate materjalidena soovitada.

Mattimar OÜ tegevust võib kahes pidevas põhisuunas vaadelda (nende kõrval on ka rida muid aktiivseid perioodilisi ning ühekordseid tegevusi):

- *teaduskonverentside korraldamine* (näiteks, majanduspoliitika alaste konverentside ettevalmistustööd aastaringselt, sh detailse töö-, kultuuri-, tervise- ja loodusprogrammi väljatöötamine; selle kooskõlastamine olulisemate esinejate ja võtmeisikutega ning mitmesugused läbirääkimised konverentsi toimumiskoha firmade ja spetsialistidega; finantsküsimuste kalkuleerimine ning sellealased läbirääkimised, vajadusel sponsorite leidmine; konverentsitõlkide leidmine ja läbirääkimised nendega; läbirääkimised toitlustuse ja majutuse osas; võimalike tõrgete ennetamine ning alternatiivlahenduste leidmine, konverentsi tegelik läbiviimine; kokkuvõtete tegemine jpm);
- *teaduskirjanduse kirjastamine* (näiteks, käesolevas ajakirjas artiklite avaldamise võimalusest laialdane teavitamine; avaldamistingimuste (mis aegajalt täpsustamist-arendamist vajavad) koostamine; tõlkimise korraldamine ja korrektsiooni tellimine; retsensentide (eeskätt välisriikides töötavate) leidmine ja läbirääkimised nendega; ülevaadete tellimine (kroonika osasse); ajakirja kokkupanemise organiseerimine; läbirääkimised ja koostöö trükikojaga; koostöö saksa kirjastuse ja Eesti ISSNi ja ISBNi keskusega; ajakirja levitamine

välisriikides ja Eestis; koostöö rahvusvaheliste andmebaasidega[6] artiklite avalikustamiseks; koostöö toimetajatega ja toimetuskolleegiumi liikmetega ning tõlkijatega; vajadusel mitmesuguste ebakõlade lahendamine jpm).

Konverentside korraldamisel võib 2013. aastal juuni lõpus Jäneda mõisa konverentsikeskuses toimuvat rahvusvahelist majanduspoliitika teaduskonverentsi juba kahekümnendat korda Mattimar OÜ-ga seostada (alates aastast 1994)[7], sest 1984. aastal toimunud esimese konverentsi ajal olime Eestis sügavas käsumajanduse tingimustes ning firma oli veel asutamata.

Paralleelselt konverentside korraldamisega toimus ka konverentsikogumike kirjastamine kuni aastani 2006. Aastast 2007 ilmub (küll konverentsikogumikest väljakasvamise tulemusena) kolmekeelne teadusajakiri nimetusega „Eesti majanduspoliitilised väitlused/ Estnische Gespräche über Wirtschaftspolitik/ Discussions on Estonian Economic Policy“[8], mis alates aastast 2011 ilmub kaks numbrit aastas (alates 2007. aastast kuulub orgaaniliselt ajakirja juurde ka täisartiklitega CD)[9]. Ajakiri on juba täiesti omaette nähtus, millel on küll mõningane side konverentsil osalejatega: nimelt paljud autorid küll kirjutavad ajakirjale kuid konverentsil ei osale ning vastupidi – mitmed kes osalevad konverentsitöös ja teevad seal ettekande, samal ajal ajakirjale kirjutanud ei ole.

Ajakirjas avaldatavad artiklid kuuluvad anonüümsele eelretsenseerimisele (ehk nn pimeretsenseerimisele) sõltumatute doktorikraadiga retsensentide poolt. Esmalt loevad artiklid läbi ajakirja toimetajad, vajadusel palutakse autoritel artikleid täiendada ning korrigeerida ja alles seejärel saadetakse artiklid valdavalt välisretsensentidele, lisaks on retsensentide hulgas ka parimad eksperdid Eestist. Retsensentide võrgustik ulatub täna enam kui 30 eksperdini, kellest enamik töötab teiste riikide ülikoolides ja rakenduskõrgkoolides. Ajapikku oleme püüdnud retsensentide hulka laiendada, sest mitte igal aastal pole kõigil retsensentidel võimalust põhitöö suure koormuse tõttu retsenseerimisega tegeleda. Retsensentide

[6] Lisaks ajakirja tiitellehe pöördel toodud andmebaasidele on hulk aastaid ajakirja tellijaks olnud ka Washingtonis asuv 1800. aastal asutatud maailma suurim raamatukogu – USA Kongressi raamatukogu. Raamatukogus on üle 130 miljoni trükise: 29 miljonit erinevat raamatut 460 keeles. Raamaturiiuleid on ühtekokku 850 kilomeetrit. Lisaks raamatutele säilitatakse seal ka 12 miljonit fotot, 4,8 miljonit maakaarti ja 57 miljonit käsikirja. Iga päev lisandub raamatukogusse keskmiselt 10 000 raamatut ja muud trükist.

[7] Kokkuvõttes on aastal 2013 Jänedal toimuv konverents idee autori ja peakorraldaja Matti Raudjärv´e jaoks juba kahekümne esimene. Varasemad kakskümmend teaduskonverentsi on toimunud Värskas ja on tuntud kui nn „Värska konverentsid“. Ilmselt olid toimunud konverentsid vähemalt üheksakümnendatel aastatel ka pisikeseks toeks Kagu-Eesti ja Värska regionaalse majanduse arengu tugevdamisel.

[8] Rahvusvahelistes andmebaasides ühtluse saavutamiseks on ajakirja nimetus keelte alusel alates 2013. aastast uues järjestuses: „Discussions on Estonian Economic Policy / Estnische Gespräche über Wirtschaftspolitik / Eesti majanduspoliitilised väitlused“.

[9] Ajakirja tulebki kui paberkandjast ja CD-st koosnevat ühtset publikatsiooni käsitleda ning teisekeelne kokkuvõte kuulub samuti orgaaniliselt täisartikli juurde ega ole eraldi seisev publikatsioon.

märkuste arvestamise osas pöördume sageli pärast autorite poolset täiendavat artiklite läbitöötamist uuesti retsensentide poole lõpliku seisukoha saamiseks.

Igal aastal on paraku ka artikleid, mille avaldamine tuleb edasi lükata seni, kuni artikkel on tõepoolest avaldamisküps. Hulk artikleid on kokkuvõttes ka hoopis kõrvale jäänud (kuigi autoritele on antud võimalus oma artiklit vastavalt retsensentide märkustele täiendada). Osa autoreid (selliseid on eriti noorema ja mõneti ka keskmise põlvkonna hulgas) on arvamusel, et nende esitatud artikkel on nii hästi kirjutatud, et seal pole kellelgi midagi kritiseerida või täiendusi soovitada. Märkuste ja täiendussoovituste peale ollakse mõnikord solvunud ning loobutakse bravuurselt märkuste arvestamisest ning artikli avaldamisest. Eks see ole nende otsus ning toimetajad võtavad seda rahulikult kui ebaküpsete isikute emotsioone. Nende artiklitega loomulikult edasi ei tegeleta ning avaldamisele need ei kuulu.

Oluline koht ajakirjas on kroonika osasse kuuluval rubriigil, mis kajastab meie hulgast lahkunud tuntud Eesti majandusteadlasi, -õppejõude ja teadusorganisaatoreid. Ülevaated nende tegevusest on valdavalt kirjutatud kolleegide, õpilaste ja sõprade poolt. Kindlasti on need kroonikas kajastatavad inimesed meenutusi väärt, sest nad on Eesti majanduse ning ühiskonna arenguks palju teinud ja andnud. Seda rubriiki kavatseme ka edaspidi jätkata. Siinjuures kõigile, kes neid ülevaateid on koostanud, allakirjutanu poolt kummardus ja tänud!

Ajakiri kuulub täna Eesti Teadusinfosüsteemi (ETIS) klassifikaatorite alusel ajakirja-artikli jaotusesse 1.2. Tegemist on rahvusvahelise teadusajakirjaga, millel on registreeritud kood (põhiline on trükise ISSN 1736-5597 [10], lisaks ka teised koodid), rahvusvaheline toimetus, rahvusvahelise kolleegiumiga eelretsenseerimine, rahvusvaheline levik ning kättesaadavus (lisaks väliskõrgkoolide ja teistele raamatukogudele ka rahvusvahelised andmebaasid nagu DOAJ, EBSCO, ECONIS, SSRN) ja avatud kaastöödele. Ajakirja trükisel ehk paberkandjal on publitseeritud kas eesti, inglise või saksa keeles ajakirja juurde kuuluval CD-l olevate täisartiklite teisekeelsed kokkuvõtted (reeglina 3-5 leheküljel). CD-l olevad täisartiklid on kas inglise (valdavalt) või saksa keeles. Publikatsioonil on ka teised ISSN koodid (CD-ROM ja pdf) ning samuti ISBN koodid (trükis, CD-ROM, pdf). Kuna publikatsiooni kaaskirjastajaks on rohkem kui kümne aasta jooksul ka saksa teaduskirjastus Berliner Wissenschafts-Verlag[11] olnud, siis on publikatsioonil samuti nende ISBN koodid.

[10] Autorid, sisestades oma käesoleva publikatsiooni artiklit ETISe süsteemi, märgivad eeskätt koodi ISSN 1736-5597, ajakirja pealkirja kolmes keeles (kõikides rahvusvahelistes andmebaasides ajakirja kirjeldamisel ühtsuse tagamiseks oleks soovitav pealkirja esitamise järjekord: inglise, saksa ja eesti keeles). Kuna igal ajakirja numbril on ka alapealkiri (see on igal numbril erinev!), läheb see ETIS-esse sisestamisel lahtrisse „Eriväljaanne".

[11] Alates aastast 2001 oli Mattimar OÜ koostööpartneriks ja kaaskirjastajaks saksa kirjastus Berlin Verlag Arno Spitz GmbH (asutatud Berliinis aastal 1962) ning aastast 2003 tema järglasena Berliner Wissenschfts-Verlag GmbH. Saksa kirjastus publitseerib täna järgmise kuue valdkonna ja akadeemilise suuna teadusuuringuid nagu õigus, majandus, poliitika, sotsioloogia, ajalugu ja filosoofia. Kirjastus annab käesoleval ajal välja 12 ajakirja ning on keskendunud koostööle Berliini ja Potsdami ülikoolide, rakendusülikoolide ja akadeemiatega, aga samuti

Aastatel 2003-2006 oli Mattimar OÜ ka Pärnus talviti jaanuaris Tartu Ülikooli Pärnu kolledži baasil toimunud nelja ettevõttemajanduse alase teaduskonverentsi kaaskorraldaja ning nende raames toimunud ettekannete-artiklite põhjal koostatud nelja konverentsikogumiku kirjastaja.

Kakskümmend Mattimari tegevusaastat on mikroettevõttena andnud küllalt hea ettevõtluskogemuse erinevates ettevõtte majandustegevuse sh raamatupidamise vallas, eeskätt aga korralduslikus ja kirjastamistegevuses. Valdavalt toimub nii konverentsi kui ajakirja ettevalmistamine allakirjutanu poolt nädalalõppudel.[12]

Tuleviku eesmärkidest: allakirjutanu on seisukohal, et kõne all olevad konverentsid[13] peavad jätkuma ka järgnevatel aastatel ning samuti peaks ajakiri ka edaspidi ilmuma. Publikatsioonis avaldatud artiklid on heaks materjaliks ka üliõpilastele oma õppeülesannete sooritusel. Ajakirja toimetajad töötavad selles suunas, et ajapikku vastaks ajakiri ka ETISe 1.1 klassifikaatorile. Sellega seoses hoitakse publitseerimise kvaliteeti veelgi suurema nõudlikkuse kaudu.

Ühtlasi tänab allakirjutanu siinjuures kõiki artiklite autoreid, konverentsil osalejaid ja esinejaid, kaastoimetajaid ja tehnilisi abilisi, rahvusvahelise toimetuskolleegiumi liikmeid, tõlke-tõlkijaid, toetajaid ning teisi kaasaaitajaid, sh sponsoreid. Südamlik tänu kõigile ning edasist sisukat ja viljakat koostööd kõigiga!

Allakirjutanu jätkab energiliselt eeltoodud suundades ka edaspidi, samas siiski lootes, et ajapikku õnnestub kaaskorraldajaid ja -tegijaid ka nooremate põlvkondade esindajate seast leida.

Matti Raudjärv
Mattimar OÜ asutaja-omanik,
juhataja-tegevdirektor;
konverentsiseeria idee autor ja peakorraldaja,
varasemate kogumike ja praeguse ajakirja peatoimetaja

Aprill 2013
Tallinnas, Pirita-Kosel

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koostööle Kesk- ja Ida-Euroopa ning Läänemere (saksa keeles: Idameri – Ostsee) ruumi erinevate institutsioonidega ja põhjapoolsete naaber-riikidega. Saksa kirjastuse orientatsioon on praktikale suunatud teadustööde avaldamine. Kuna majanduspoliitika on rakendusmajandusteadus, siis sobib ajakirja „Eesti majanduspoliitilised väitlused“ väljaandmine hästi koostööks kõnesoleva saksa kirjastusega.

[12] Aastatel 2007-2010 kui ajakirja ilmus üks number aastas, kulus allakirjutanul konverentsi ja ajakirja ettevalmistamiseks vastavalt arvestustele ca 85 kaheksatunnist tööpäeva pea aastaringselt. Nüüd, kus ilmub kaks ajakirja numbrit aastas, on tööle kulunud tööpäevade arv aastas kaugelt üle saja.

[13] Juhul kui Tartu Jõesadamasse jõuab Peipsil sõitmiseks sobiv ja pardal konverentsitegevust võimaldav ning ka hinnalt vastuvõetav laev, korraldatakse suure tõenäosusega teaduskonverents vähemalt korraks jälle Värskas (konverentsitöö toimuks valdavalt küll laeva pardal sinna- ja tagasisõidul).

MATTIMAR GmbH BLICKT AUF ZWANZIG GESCHÄFTSJAHRE ZURÜCK

Die Firma „Mattimar“, die heute auf zwanzig Jahre Geschäftsjahre zurückblicken kann, wurde erstmalig bei der Gewerbeabteilung der Tallinner Stadtverwaltung am 12. Oktober 1993 als Aktiengesellschaft eingetragen. Gemäß des Handelsgesetzbuches der Republik Estland, das am 1. September 1995 in Kraft trat, wurde die Neueintragung aller Unternehmen durchgeführt und die Firma „Mattimar“ setzte ihre Tätigkeit als GmbH fort. Der Gründer und alleinige Eigentümer der Firma ist Matti Raudjärv. Der Name der GmbH ist auf die Kombination der Vornamen des Gründers und seiner im Jahre 1975 geborenen Tochter Mari-Liis zurückzuführen. Die Firma „Mattimar“ ist ein Mikrounternehmen, dessen Gründung durch Notwendigkeit, beim Organisieren von Wissenschaftskonferenzen schnell und unbürokratisch zu handeln, angeregt wurde. Mit der Zeit kamen andere, zum Teil ergänzende Geschäftsfelder dazu (Verlegen von wissenschaftlichen Publikationen, Weiterbildung, Wirtschaftsberatung, aber auch Forstwesen u. ä. m.)

Die Mattimar GmbH hat zwei Hauptgeschäftsfelder (hinzu kommt eine ganze Reihe von einmaligen und periodischen Projekten):

- *Veranstaltung von wissenschaftlichen Konferenzen* (ganzjährig die Vorbereitung der wirtschaftspolitischen Konferenzen: detaillierte Ausarbeitung des Programms für den Konferenzablauf und für Wellness-und Wanderangebote, verschiedene Koordinierungsgespräche mit führenden Konferenzreferenten und Schlüsselpersonen und Spezialisten an Austragungsorten; Kalkulation der finanziellen Seite und entsprechende Verhandlungen, bei Bedarf Sponsorenfindung; Anstellung von Konferenzdolmetschern, Organisierung von Verpflegung und Unterbringung; Vorbeugung möglicher Störfaktoren und Findung von Alternativlösungen; tatsächliche Durchführung der Konferenz; Erstellung von zusammenfassenden Berichten usw.)
- *Verlegen von wissenschaftlichen Publikationen* (Informieren über Veröffentlichungsmöglichkeiten in der vorliegenden Zeitschrift; Verfassen von Veröffentlichungsanforderungen (die immer wieder präzisiert und geändert werden müssen); Erstellung von Übersetzungs- und Korrekturaufträgen; Findung von (in erster Linie ausländischen) Rezensenten; Erstellung von Aufträgen für Übersichtsartikel im Chronikteil; Zusammenstellung der Zeitschrift, Verhandlungen und Zusammenarbeit mit der Druckerei; Kooperation mit dem deutschen Verlag und der estnischen ISSN- und ISBN-Filiale; Verbreitung der Zeitschrift im Ausland und Estland; Zusammenarbeit mit internationalen Datenbasez[1] zur Veröffentlichung von Artikeln; Zusammenarbeit mit Redakteuren und Mitgliedern des Redaktionskollegiums und Übersetzern; Sicherstellung des reibungslosen Verlaufs des Herausgabeprozesses u. ä. m.)

[1] Zusätzlich zu den Datenbasen, die auf der Rückseite des Titelblattes der Zeitschrift aufgeführt sind, gehört zu den Abonnenten der Zeitschrift schon seit mehreren Jahren die größte Bibliothek der Welt, die im Jahre 1800 in Washington gegründete ***Library of Congress***.

Was die Veranstaltung von Konferenzen betrifft, so wird die wissenschaftliche Konferenz über Wirtschaftspolitik, die Ende Juni 2013 im Konferenzzentrum des Gutshofes Jäneda stattfindet, schon das zwanzigste Mal unter Mitwirkung der Mattimar GmbH ausgetragen, d. h. seit 1994[2], weil im Jahre 1984, als die erste Konferenz stattfand, in Estland im vollen Umfang die Kommandowirtschaft herrschte und man von der Gründung einer Firma nur träumen konnte.

Die Beiträge, die in der Zeitschrift veröffentlicht werden, werden vorher von unabhängigen promovierten Rezensenten anonym rezensiert (sogenanntes „blindes" Rezensieren). Zuerst lesen die Redakteure der Zeitschrift die Artikel durch. Wenn notwendig, werden die Autoren gebeten, ihre Beiträge zu vervollständigen oder zu korrigieren, erst dann werden sie an Rezensenten verschickt. Bis heute haben wir ein dreißig Rezensenten umfassendes Netzwerk schaffen können, dem renommierte Experten meistens ausländischer Hochschulen, aber auch estnische Kollegen angehören. Wir haben uns bemüht, den Kreis der Rezensenten weiter auszubauen, weil es jedes Jahr nicht allen Kollegen wegen hoher Arbeitsbelastung möglich ist, sich mit dem Rezensieren zu beschäftigen. Was die Berücksichtigung der Anmerkungen von Rezensenten betrifft, so werden sie, nachdem die Autoren ihre Beiträge noch einmal bearbeitet haben, neu kontaktiert, um ihre endgültige Meinung zu erfahren.

Eine bedeutende Rolle im Chronikteil der Zeitschrift spielt die Rubrik, in der estnische Wirtschaftswissenschaftler, Hochschullehrer und Wissenschaftsorganisatoren, die nicht mehr unter uns verweilen, gewürdigt werden. Sie alle haben zur Entwicklung der estnischen Wirtschaft und Gesellschaft viel beigetragen. Diese Übersichtsbeiträge über ihr Leben und Wirken werden größtenteils von ihren Kollegen, Freunden oder Studenten geschrieben. Wir haben vor, diese Übersichtsreihe weiterhin fortzusetzen. An dieser Stelle möchte ich mich bei den Autoren, die die Übersichten verfasst haben, recht herzlich bedanken!

Die zwanzig Geschäftsjahre der Mattimar GmbH waren sehr erfahrungsreich in verschiedenen Bereichen der Wirtschaftstätigkeit als Mikrounternehmen. Mein herzlicher Dank gilt an allen Autoren, Referenten und anderen Konferenzteilnehmern, Redakteuren und technischen Mitarbeitern, Mitgliedern des internationalen Redaktionskollegiums, Dolmetschern und Übersetzern, Unterstützern und Sponsoren. Ich hoffe auf die weiterhin gute, inhaltsreiche und fruchtbare Zusammenarbeit mit allen!

Matti Raudjärv

April 2013
Tallinn, Pirita-Kose

[2] Im Grunde genommen ist die im Jahre 2013 in Jäneda stattfindende Konferenz für Matti Raudjärv, den Initiator und Hauptveranstalter der Konferenzreihe, schon die einundzwanzigste Veranstaltung dieser Art. Diese Konferenzen fanden in Värska statt und sind auch als „Värska-Konferenzen" bekannt. Es ist möglich, dass die Tagungen mindestens in den Neunzigern eine kleine Unterstützung für die örtliche Wirtschaft in Värska und somit in der ganzen südöstlichen Region Estlands darstellten.

MATTIMAR OÜ – TWENTY YEARS OF ACTIVITIES

The Mattimar Company which has been operating for 20 years was first registered on 12 October 1993 as a public limited company with the Enterprise Department of the Tallinn City Government. According to the Commercial Code of the Republic of Estonia, which came into effect on 1 September 1995, companies were reregistered and Mattimar continued its activities as a private limited company. Matti Raudjärv has been the founder and sole owner of the company, the name Mattimar is a combination of the founder's first name and the first name of his daughter Mari-Liis who was born in 1975. The Mattimar Company can be regarded as a microenterprise which was established due to the need to take prompt action without bureaucracy in organising scientific conferences and to perform other, often related activities (publishing, further training, business consultations but also forestry, etc.).

The activities of Mattimar OÜ have had two main orientations (but in parallel also a number of other active periodic and one-time activities):

- *organisation of scientific conferences* (e.g. year-round preparation of conferences on economic policy, incl. the development of their detailed working programme, cultural, health and nature programme; its coordination with the main presenters and key persons and different negotiations with the businesses and specialists of the conference site; estimates of financial issues and holding the respective negotiations, finding sponsors, if necessary; finding conference interpreters and holding negotiations with them; negotiations over catering and accommodation; prevention of possible problems and finding alternative solutions, actual conduction of the conference; drawing conclusions, etc.);
- *publishing of scientific literature* (e.g. distribution of information on opportunities for publishing papers in this journal; preparation of terms and conditions for publishing (which require specification and development from time to time); organisation of translation and proofreading; finding peer reviewers (above all from foreign countries) and holding negotiations with them; ordering overviews (to the chronicles section); organisation of the compilation of materials for the journal; negotiations and co-operation with the printing office; co-operation with the publishing house in Germany and the Estonian ISSN and ISBN Centre; distribution of the journal in foreign countries and in Estonia; co-operation with international databases[1] for the inclusion of the papers; co-operation with editors and with the editorial board and the translators; if necessary, solution of different problems, etc.).

As to organisation of conferences, Mattimar OÜ has been related to the international conference on economic policy, which will be held in Jäneda Manor at the end of

[1] In addition to the databases listed on the verso of the title page, also the world's largest library established in Washington in 1800 – **the Library of the U.S. Congress** – has been a subscriber to this journal for a number of years.

June 2013, already for 20 years (since 1994)[2] as at the time of the first conference in 1984 under the conditions of deep command economy in Estonia the company had not been established yet.

The papers published in the journal undergo anonymous peer review (i.e. „blind peer review“) by independent reviewers with a doctoral degree. The papers are first read by the editors of the journal who may then ask the authors to make revisions or amendments to the papers, after which the papers will be sent mainly to foreign peer reviewers but also to top experts from Estonia. The current network of peer reviewers includes more than 30 experts, mainly from the universities and institutions of professional higher education of other countries. We have made efforts to gradually increase the number of experts as not all peer reviewers are able to undertake reviewing every year due to their main job assignments. After amendment of the papers by authors according to the comments of reviewers, we often contact the reviewers again to obtain their final opinion.

The chronicles section of the journal includes an important column on recently deceased well-known Estonian economists, academic staff and research organisers. Overviews of their activities have been mainly written by their colleagues, students and friends. These persons presented in the chronicles are certainly worth remembering because of their important activities and contribution to the Estonian economic and social development. We intend to continue the column also in the future. Therefore a deep bow and many thanks from the undersigned to everybody who has prepared these overviews!

The 20 years of activities of Mattimar OÜ as a microenterprise have provided sufficiently good business experience in different areas of corporate business, including accounting, but above all in management and publishing activities.

The undersigned also appreciates the contribution of all authors of papers, participants and presenters in conferences, co-editors and technical assistants, members of the international editorial board, interpreters and translators, supporters and other contributors, including the sponsors. Giving my heartfelt thanks to everybody and looking forward to further substantial and fruitful co-operation with all of you.

Matti Raudjärv
Founder-owner and manager of Mattimar OÜ;
author of the idea and main organiser of the series of conferences,
chief editor of the earlier collections and the current journal

April 2013
At Pirita-Kose in Tallinn

[2] The conference which will be held at Jäneda in 2013 is actually already the 21st for Matti Raudjärv, the author of the idea and the main organiser. The twenty earlier scientific conferences have taken place at Värska and have been known as „the Värska conferences“. Organisation of these conferences probably also supported the development of the regional economy of Southeast Estonia and Värska, at least in the 1990s.

MAJANDUSPOLIITIKA TEADUSKONVERENTSID EESTIS (1984-2013)

WISSENSCHAFTLICHE KONFERENZEN ÜBER WIRTSCHAFTSPOLITIK IN ESTLAND (1984-2013)

SCIENTIFIC CONFERENCES ON ECONOMIC POLICY IN ESTONIA (1984-2013)

I	1984	Ühiskondliku tootmise intensiivistamise probleemid Eesti NSV-s
II	1994	Majandusteadus ja majanduspoliitika Eesti Vabariigis
III	1995	Majanduspoliitika teooria ja praktika Eesti Vabariigis
IV	1996	Aktuaalsed majanduspoliitika küsimused Euroopa Liidu riikides ja Eesti Vabariigis /I ja II/ Aktuelle wirtschaftspolitische Fragen in den Ländern der Europäischen Union und in der Republik Estland /I und II/ Topical Problems of the Economic Policy in the Member States of the European Union and the Republic of Estonia /I and II/
V	1997	Eesti Vabariigi majanduspoliitika ja integreerumine Euroopa Liiduga Die Wirtschaftspolitik der Republik Estland und die Integration mit der Europäischen Union Economic Policy of the Republic of Estonia and Integration with the European Union
VI	1998	Eesti Vabariigi integreerumine Euroopa Liiduga – majanduspoliitika eesmärgid ja abinõud Die Integration der Republik Estland mit der Europäischen Union – Ziele und Mittel der Wirtschaftspolitik Integration of the Republic of Estonia into the European Union – Goals and Instruments of Economic Policy
VII	1999	Eesti Vabariigi majanduspoliitika ja Euroopa Liit Wirtschaftspolitik der Republik Estland und die Europäische Union Economic Policy of the Republic of Estonia and the European Union
VIII	2000	Eesti Vabariigi majanduspoliitika tulemuslikkus ja Euroopa Liit Wirksamkeit der Wirtschaftspolitik der Republik Estland und die Europäische Union Effectiveness of the Economic Policy of the Republic of Estonia and the European Union
IX	2001	Harmoniseerimine ja vabadus Eesti Vabariigi majanduspoliitikas integreerumisel Euroopa Liiduga Harmonisierung und Freiheit der Wirtschaftspolitik Estlands in EU-Integrationsprozess Harmonisation and Freedom in the Economic Policy of Estonia integrating with the European Union
X	2002	Euroopa Liiduga liitumise mõju Eesti majanduspoliitikale Die Integration der Europäischen Union und ihre Wirkungen auf die Wirtschaftspolitik Estlands Effect of Accession to the European Union on the Economic Policy of Estonia

XI	2003	Eesti majanduspoliitika teel Euroopa Liitu Die Wirtschaftspolitik Estlands auf dem Weg in die Europäische Union Estonian Economic Policy on the way towards the European Union
XII	2004	Eesti majanduspoliitilised perspektiivid Euroopa Liidus Wirtschaftspolitische Perspektiven Estlands als Mitglied der Europäischen Union Economic Policy Perspectives of Estonia in the European Union
XIII	2005	XIII majanduspoliitika teaduskonverents Die XIII wirtschaftspolitische Konferenz 13th Scientific Conference on Economic Policy
XIV	2006	XIV majanduspoliitika teaduskonverents Die XIV wirtschaftspolitische Konferenz 14th Scientific Conference on Economic Policy
XV	2007	Eesti majanduspoliitika – kolm aastat Euroopa Liidus Die Wirtschaftspolitik Estlands – drei Jahre in der Europäischen Union Economic Policy of Estonia – three Years in the European Union
XVI	2008	Majanduspoliitika Euroopa Liidu riikides – aasta 2008 Die Wirtschaftspolitik in den EU-Mitgliedsstaaten – 2008 Economic Policy in the EU Member States – 2008
XVII	2009	Majanduspoliitika Euroopa Liidu riikides – aasta 2009 Die Wirtschaftspolitik in den EU-Mitgliedsstaaten – 2009 Economic Policy in the EU Member States – 2009
XVIII	2010	Majanduspoliitika Euroopa Liidu riikides – aasta 2010 Die Wirtschaftspolitik in den EU-Mitgliedsstaaten – 2010 Economic Policy in the EU Member States – 2010
XIX	2011	Majanduspoliitika Euroopa Liidu riikides – aasta 2011 Die Wirtschaftspolitik in den EU-Mitgliedsstaaten – 2011 Economic Policy in the EU Member States – 2011
XX	2012	Majanduspoliitika Euroopa Liidu riikides – aasta 2012 Die Wirtschaftspolitik in den EU-Mitgliedsstaaten – 2012 Economic Policy in the EU Member States – 2012
XXI	2013	Majanduspoliitika Euroopa Liidu riikides – aasta 2013 Die Wirtschaftspolitik in den EU-Mitgliedsstaaten – 2013 Economic Policy in the EU Member States – 2013

NB! Järgmine majanduspoliitika teaduskonverents toimub / Die nächste wirtschaftspolitische Konferenz findet start / The next scientific conference on economic policy will be held:

XXII	26.-28.06.2014 (Eesti-Estland-Estonia): Majanduspoliitika Euroopa Liidu riikides – aasta 2014 Die Wirtschaftspolitik in den EU-Mitgliedsstaaten – 2014 Economic Policy in the EU Member States – 2014	

Täpsem information alates oktoobrist-novembrist 2013 / Genauere Informationen ab Oktober-November 2013 / More detailed information from October-November 2013: www.mattimar.ee