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Bibliometric analysis of scientific publications on tax evasion using bibliometrix R and the VOSviewer tool

Abstract: Tax evasion is an illegal activity that consists in not paying taxpayers' obligations to the state, through fraudulent maneuvers that change the amount of taxes to be paid. This research analyzes the scientific production with reference to the phenomenon of tax evasion in the Scopus database during the years 2010-2022. This research aims to determine the state of knowledge of the phenomenon of tax evasion at the global level, identify future research trends, the most frequently cited authors in the field, the collaboration between research institutions, the co-author network of countries, as well as the most addressed publications from different studies, journals and countries that address the topic of tax evasion. Publications with reference to the phenomenon of tax evasion were retrieved and extracted from Scopus, which is a bibliographic and bibliometric database in online format, including scientific journals, delivered via the Internet. Provides access to abstracts of scientific articles from more than 22,400 international scientific journals published by more than 5,000 international publishing houses, without language restrictions, in the reference period 2010-2022. Bibliometrix R was used in calculating and visualizing bibliographic information extraction and performing descriptive analysis. The VOSviewer tool was used to construct, review and visualize the geographical areas with the most frequent studies on this topic, by analyzing the international collaboration of the authors.

Keywords: bibliometrics, tax evasion, scientific mapping.

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Analiza bibliometrică a publicaţiilor ştiinţifice privind evaziunea fiscală prin utilizarea bibliometrix R şi instrumentul VOSviewer

Abstract: Evaziunea fiscală este o activitate ilegală care constă în neplata obligaţiilor contribuabililor faţă de stat, prin manevre frauduloase care modifică cuantumul impozitelor de plătit. Această cercetare analizează producţia ştiinţifică cu referire la fenomenul evaziunii fiscale în baza de date Scopus în perioada anilor 2010-2022. Această cercetare îşi propune determinarea stadiului cunoaşterii fenomenului evaziunii fiscale la nivel global, identificarea viitoarelor tendinţe de cercetare, autorii cei mai des citaţi din domeniu, colaborarea între instituţiile de cercetare, reţeaua de co-autor al ţărilor, precum şi publicaţiile cele mai abordate din diferite studii, reviste şi ţări care abordează tematica evaziunii fiscale. Publicaţiile cu referire la fenomenul evaziunii fiscale au fost preluate şi extrase din Scopus, care este o baza de date bibliografică şi bibliometrică în format online, cuprinzând reviste ştiinţifice, livrată prin intermediul Internetului. Oferă acces la rezumatele articolelor ştiinţifice din peste 22,400 de reviste ştiinţifice

internaţionale publicate la peste 5,000 de edituri internaţionale, fără restricţii de limbă, în perioada de referinţă 2010-2022. Bibliometrix R a fost utilizat în calculul şi vizualizarea extragerii informaţiilor bibliografice şi efectuarea unei analize descriptive. Instrumentul VOSviewer s-a utilizat pentru a construi, examina şi vizualiza examinat zonele geografice cu studiile cele mai frecvente pe această temă, prin analiza colaborării internaţionale a autorilor.

Termeni cheie: bibliometrie, evaziune fiscală, cartografiere ştiinţifică.

Introducere

Principalul obiectiv al acestei lucrări este reprezentat de cartografierea cercetărilor identificate în baza de date Scopus (*Scopus date*), cu privire la evaziunea fiscală, respectiv cuantificarea stadiului actual al cunoaşterii pe acest subiect, identificarea şi prezentarea termenilor celor mai utilizaţi în cadrul cercetărilor referitoare la evaziunea fiscală, prin utilizarea softului VOSviewer (*Eck & Waltman, 2010*), pentru a stabili un tipar de cercetare, prin raportare la temele abordate cele mai frecvente.

Din perspectivă istorică, analiza bibliometrică îşi are originile în ţările vestice şi se referă la studiul bibliografiei cu ajutorul instrumentelor statistice (*Egghe & Rousseau, 1990*). În ţările din est, susţin autorii, măsurarea progresului ştiinţific apare sub denumirea de scientometrie. De altfel, în Ungaria regăsim un jurnal cu aceeaşi denumire (Scientometria) datând din anul 1978.

În literatura de specialitate, a utilizat pentru prima dată termenul de bibliografie statistică cu referire la procedeele de numărare a publicaţiilor din domeniul ştiinţei şi tehnologiei (*Hulme, 1923*). Dar această metodă de cercetare a devenit cunoscută începând cu anul 1969, când Pritchard a propus folosirea termenului de bibliometrie pentru a descrie aplicarea metodelor statistico-matematice în analiza cărţilor şi a publicaţiilor (*Pritchard, 1969*).

Analiza bibliometrică reprezintă instrument major pentru înţelegerea anumitor aspecte ale rezultatelor cercetării. Bibliometria are ca scop analiza statistică cu privire la cărţi, reviste, articole ştiinţifice şi autori. Analiza frecvenţei cuvintelor, analiza citărilor sau a numărului de articole ale anumitor autori au fost elementele de bază pentru astfel de studii statistice.

După anii 1990 bibliometria a fost transformată dintr-un simplu studiu de statistică bibliografică într-un domeniu separat şi unic de studiu (*Karanatsiou et al., n.d.*). Indicatorii bibliometrici sunt aplicaţi cu precădere de către guverne şi diverse organizaţii de finanţare, în special datorită aplicabilităţii lor la scară largă, costurilor şi a timpului redus, precum şi a obiectivităţii lor. Scopul utilizării acestor indicatori este de a optimiza alocările pentru cercetare şi de a face finanţarea mai eficientă şi mai efectivă (*Weingart, 2005*; *Moed, 2005*).

De asemenea sunt constatate şi avantaje în implementarea analizei bibliometrice care o face adecvată pentru evaluarea cercetării, cum sunt:

1) oferă o evaluare a producţiei ştiinţifice într-o anumită zonă de cercetare pe o perioadă de timp, folosind indicatori de evaluare a performanţei cercetării (*Garfield, n.d.*);
2) analizează datele cu privire la esenţa activităţii ştiinţifice;
3) datele bibliometrice pot fi identificate şi evaluate cu uşurinţă pentru un spectru larg de discipline care utilizează baze de date reprezentate (*Bornmann & Leydesdorff, 2014*);
4) analizează ştiinţa ca un sistem de generare a cunoştinţelor (*Raan, 2005*);

5) rezultatele bibliometriei se corelează bine cu alţi indicatori privind calitatea cercetării (*Diekmann et al., 2012*);

6) este posibilă sintetizarea unor cantităţi mari de informaţii şi stabilirea unor caracteristici esenţiale privind peisajul cercetării;

7) permite comparaţii între diferite discipline ştiinţifice, precum şi între diferite ţări (*Pouris, 2016*).

Metodele bibliometrice sunt aplicabile la diferite niveluri ale activităţilor de cercetare, cum sunt indivizi, grupuri de cercetare, instituţii şi ţări. Dificultatea obţinerii datelor şi precizia analizei diferă în funcţie de nivel, prin urmare, există diferenţe considerabile între metodele de analiză utilizate în fiecare nivel.

O analiză bibliometrică se poate face la nivel macro, mezo sau micro (*Moed, 2005*), astfel la nivel macro poate fi făcută evaluarea tuturor domeniilor de cercetare în ansamblu, teme specifice sau a regiunilor geopolitice, precum şi evaluarea performanţei unei ţări în diverse domenii ştiinţifice. La nivel naţional, datele şi indicatorii care rezultă sugerează modalităţi de a compara impactul, producţia şi productivitatea ştiinţifică cu alte ţări şi de a justifica cheltuielile pentru cercetarea ştiinţifică. La nivel micro analiza poate fi limitată la nivelul practicii individuale de cercetare sau grupuri mici de cercetare.

Totodată, numărul de lucrări ştiinţifice publicate de un cercetător nu este suficient pentru a obţine date statistice semnificative în evaluarea bibliometrică a unei comunităţi ştiinţifice care includ grupuri de cercetare, departamente universitare, instituţii, corporaţii, societăţi, ţări, regiuni geopolitice, domenii ştiinţifice sau subdomenii (*Repanovici, 2011*).

De asemenea, activitatea de cercetare trebuie să fie analizată în mod sistematic la nivelul mezo (intermediar), cum ar fi instituţiile mari, de exemplu, universităţi, facultăţi, departamente şi instituţii de cercetare. Astăzi, bibliometria este un instrument primordial pentru organizaţii, cum ar fi universităţile şi organismele guvernamentale, de măsurare a performanţei cercetării.

Utilizarea largă a tehnicilor bibliometrice este posibilă prin acces simplu la articole, citări şi instrumente analitice atât în Web of Science (WoS) a companiei Clarivate Analytics, cât şi în Scopus a companiei Elsevier. Măsurarea în mediul universitar actual este bazată pe dovezi şi, aşa cum a remarcat Kwok Leung, „în prezent există tot mai mari presiuni asupra cadrelor universitare de a publica în cele mai citate reviste şi de a aduna cât mai multe citări în lucrările lor" (*Leung, 2007*).

Conchidem, astfel că analiza bibliometrică a publicaţiilor ştiinţifice nu este o noutate în activitatea de cercetare, fiind actualmente intens utilizată în întreaga lume. Această metodă de studiu al literaturii înglobează două finalităţi principale: pe de o parte, cartografierea ştiinţifică (science mapping), care are drept scop determinarea structurii şi dinamicii domeniilor ştiinţifice, şi pe de altă parte, analiza de performanţă (performance analysis), care urmăreşte evaluarea cercetării şi performanţei instituţiilor şi autorilor de lucrări de cercetare (*Abdullah et al., 2017*)

În acest studiu am utilizat instrumentele de analiză bibliometrică pe datele din baza Scopus, Bibliometrix (*Aria & Cuccurullo, 2017*), un instrument R pentru analiza completă a cartografierii ştiinţifice, care a fost utilizat pentru extragerea, analiza şi vizualizarea informaţiilor bibliografice, cum ar fi reţelele de co-citare a autorilor, reţelele de colaborare a instituţiilor.

Bibliometrix (*Aria & Cuccurullo, 2017*) este un instrument open-source pentru executarea unei analize cuprinzătoare de cartografiere ştiinţifică a literaturii ştiinţifice.

A fost programat în limbajul R pentru a fi flexibil şi pentru a facilita integrarea cu alte pachete statistice şi grafice. Într-adevăr, bibliometria este o ştiinţă în continuă schimbare, iar bibliometrix are flexibilitatea de a fi actualizat şi integrat rapid. Dezvoltarea sa se poate adresa unei comunităţi mari şi active de dezvoltatori formată din cercetători de seamă.

Bibliometrix (*Aria & Cuccurullo, 2017*) oferă diverse rutine pentru importarea datelor bibliografice din bazele de date SCOPUS, Web of Science, Dimensions, PubMed şi Cochrane ale Clarivate Analytics, efectuând analize bibliometrice şi construind matrici de date pentru co-citare, cuplare, analiză de colaborare ştiinţifică şi analiza co-cuvinte.

VOSviewer (*Eck & Waltman, 2010*) s-a utilizat pentru colectarea de date bibliografice pe reţele de colaborare, documente şi surse ale cercetătorilor, autorilor şi ţărilor. VOSviewer este un instrument software care creează hărţi folosind date din reţea pentru a construi reţele de articole ştiinţifice, reviste ştiinţifice, organizaţii de cercetare, ţări şi cuvinte cheie. VOSviewer creează hărţi bazate pe reţea, vizualizează şi explorează hărţi şi acceptă trei tipuri vizualizări de hărţi: vizualizarea reţelei, vizualizarea suprapusă şi vizualizarea densităţii (*Waltman & Eck, 2013*).

Context teoretic

La nivel global, autorii din literatura de specialitate elaborează diferite definiţii conceptului evaziunii fiscal. Când vorbim de evaziune fiscală, suntem de acord cu Paredes (2016), care menţionează că evaziunea fiscală este un fapt care îngrijorează toate ţările lumii pentru că a produs, cum ar fi scăderea veniturilor, deficitul fiscal şi scăderea investiţiilor private (*Jacinto et al., 2019*). Alt autor din literatura de specialitate internaţională, (*Washco Castro, 2015*) precizează că evaziunea presupune orice acţiune prin care o persoană fizică nu plăteşte impozitele pe care legile în vigoare le impun. Cu alte cuvinte, evaziunea fiscală reprezintă o fraudă constând în nerespectarea legislaţiei fiscale în vigoare într-o ţară din care rezultă mai multe procese legale implicate cu contribuabilul; astfel de procese supraveghează protecţia administraţiei fiscal (*Guamán Pinchao, 2013*).

Din perspectiva lui (*Montano Barbuda & Vásquez Pacheco, 2016*), evaziunea fiscală reprezintă atât dificultatea de a colecta inputuri pentru dezvoltarea economică a unei naţiuni, cât şi unul dintre principalii indicatori ai lipsei de angajament social şi colectiv care tind să crească în viitorul societăţii.

In literatura românească de specialitate, de după 1990, evaziunea fiscală este tratată, în general, ca având două mari forme, a căror criteriu de departajare îl reprezintă natura juridică: evaziune frauduloasă sinonimă cu frauda fiscală, ilegală, ilicită, şi evaziune frauduloasă, legală, adică "tolerată" de lege sau la adăpostul legii, care se manifestă prin valorificarea de contribuabili a "lacunelor legii".

Contribuabilul corect, care declară toate veniturile şi este dispus să achite către buget, taxele şi impozitele aferente, se transformă în contribuabilul care încearcă să ocolească legea prin diverse moduri, în primul rând prin nedeclararea corectă a veniturilor. Ia naştere, astfel, evazionistul, care, prin eludarea dărilor către stat, îşi sporeşte averea proprie, în detrimentul dezvoltării unui sistem bugetar trainic.

Este suficient să se recurgă o sigură dată la o astfel de infracţiune, pentru a se recurge şi a doua oară. Se pune în discuţie cine suportă presiunea lăsată în urmă, prin săvârşirea fraudelor economice? Populaţia care declară corect şi achită dările aferente declaraţiilor depuse la organele

fiscale, prin urmare ei sunt cei care suportă şi sunt afectaţi în cea mai mare măsură de efectele negative care iau naştere din săvârşirea infracţiunilor economice.

Autorităţile statelor prin aplicarea diferitelor măsuri legislative încercă să combată acest gen de infracţiune prin diverse modalităţi: confiscarea averii infractorilor, punerea de sechestru pe averea infractorilor pentru a-i împiedica să o înstrăineze – conform noilor prerogative în vigoare, se poate merge până la punerea sechestrului asupra averii rudelor celui învinuit, aplicarea unor pedepse privative de libertate tot mai aspre.

În ultimii ani s-au dezvoltat sisteme de cooperare europene şi internaţionale, punându-se la punct unele măsuri de combatere a acestui gen de infracţiuni, în vederea introducerii unor sisteme eficiente de asistare în sechestrarea bunurilor ilicite.

Uniunea Europeană a încercat, în cadrul reuniunilor statelor membre, să elaboreze instrumente de îmbunătăţire pentru statele europene de combatere a evaziunii fiscale şi fraudei. Astfel, Uniunea Europeană propune statelor membre să folosească cât mai bine soluţiile propuse:

- Dezvoltarea unei strategii de combatere eficientă a fraudei fiscale, respectiv a evaziunii fiscale;
- Utilizarea tuturor informaţiilor pe care le deţine agentul economic;
- Elaborarea unor declaraţii de impunere pre completate;
- Reducerea economiei subterane ş.a.

Apare, astfel, necesitatea unei bune colaborări a organelor de control fiscal cu organele de control judiciar. Se impune o cunoaştere temeinică de către autorităţi a legislaţiei de profil, dar şi a legislaţiei în general, pentru a putea înţelege mai bine mecanismele economice utilizate de organizaţiile şi persoanele care săvârşesc infracţiuni economice şi pentru a aborda noi metode de prevenire şi combatere. Se impune o utilizare în paralel a noţiunilor de drept şi a celor economice de către autorităţi.

În literatura de specialitate întâlnim şi conceptul de planificare fiscală internaţională, care a fost introdus o dată cu apariţia noţiunii de paradis fiscal. Potrivit opiniei lui C. Corduneanu paradisul fiscal este un stat sau o zonă geografică cu un regim de impozitare aproape inexistent şi un grad ridicat de discreţie fiscală sau o zonă unde se pot suprima obligaţiile fiscale în deplină legalitate şi aproape imposibil de controlat.

Doctrina dreptului financiar şi fiscal asociază însă evaziunea fiscală şi în special evaziunea fiscală internaţională cu paradisurile fiscale localizate în acele teritorii sau ţări în care ponderea prelevărilor fiscale este redusă sau inexistentă.

O altă componentă a planificării fiscale internaţionale este reprezentată de tratatele de evitare a dublei impuneri, ca urmare a faptului că aplicabilitatea legilor fiscale naţionale se limitează la graniţele unei ţări, controlul fiscal nu poate fi extins la nivel internaţional, ceea ce permite producerea evaziunii fiscale internaţionale.

La nivelul Uniunii Europene sunt definite modele de evaziune fiscală cu efect asupra veniturilor proprii prin intermediul acquis-ului comunitar în domeniul evaziunii fiscale şi tratează distinct problematica prevenirii evaziunii fiscale, care este unul din obiectivele principale ale politicii sale fiscale. Acquis-ul comunitar în materie de evaziune fiscală face referire la schemele de eludare a T.V.A., a impozitelor legate de producţie, respectiv a importurilor.

Legislaţia UE prevede ca secţiune distinctă a capitolului impozitare problematica prevenirii evaziunii şi sustragerii fiscale, buna guvernanţă fiscală este elementul cheie al politicilor comunitare anti-evazioniste.

O directivă importantă a Uniunii Europene este Directiva pentru o bază fiscală consolidată comună a societăţilor, care pune bazele unui set de norme de calculare a bazei fiscale pentru societăţile care operează tranzacţii în cadrul Uniunii Europene. Normele fac referire la modalitatea de calcul a rezultatelor fiscale individuale, consolidarea rezultatelor şi repartizarea bazei fiscale între statele membre şi nu au aplicabilitate în cazul ratelor de impozitare care sunt specifice fiecărui stat membru sau normelor naţionale în domeniul contabilităţii financiare. Sistemul nu are caracter obligatoriu, iar în cazul în care o societate doreşte să îl aplice o poate face pe o perioadă de cinci ani, care poate fi prelungită cu încă trei ani. Ca şi principalele avantaje ale sistemului sunt creşterea transparenţei fiscale, reducerea birocraţiei, crearea unei pieţe interne mai accesibile pentru entităţile care nu derulează încă operaţiuni transfrontaliere, reducerea evaziunii fiscale şi a dublei impozitări.

Metodologia de cercetare

Datorită faptului că interesul nostru de cercetare vizează terminologia conceptului evaziunii fiscale, am dorit să realizăm relevanţa acesteia în literatura de specialitate prin utilizarea bibliometriei. Pentru a atinge obiectivul general al acestei lucrări, s-au definit ca obiective secundare următoarele obiective:

- Realizarea unei analize bibliometrice a studiilor de cercetare, având ca subiect evaziunea fiscală pe baza datelor şi informaţiilor extrase de pe platforma Scopus (*Scopus Platform*);
- Identificarea celor mai relevante clustere tematice şi a celor mai frecvenţi termeni utilizaţi în studiile de cercetare referitoare la evaziunea fiscală.

Protocolul de căutare urmat pe platforma Scopus:

- Selectarea tuturor bazelor de date (Titlu, autor, cuvinte cheie);
- Căutarea de bază după cuvintele evaziune fiscală (tax evasion) în titlu;
- Perioada: intervalul de timp 2010-2022.

Rezultatele, în număr de 862 au fost generate în urma interogării efectuate la data de 10 octombrie 2022, ca interval temporar rezultând perioada 2010-2022, în anul 2010 fiind înregistrate 28 publicaţii, iar în anul 2022 sunt înregistrate 93 de publicaţii (*Tabel 1*).

În tebelul nr 1 am redat numărul publicaţiilor pe fiecare an, rezultate din interogarea bazei de date Scopus, în perioada de referinţă 2010-2022 (*Tabel 2*; *Figura 1*).

Se constată astfel că publicaţiile cresc ca volum în anii 2012, 2014, 2015, 2016, 2019, 2020, 2021, iar anul 2022 putem consideră că este un an nesemnificativ deocamdată pentru că încă nu s-a finalizat.

De asemenea s-au făcut interogări în baza de date Scopus cu referire la impactul surselor de cercetare care studiază si informaţii referitoare la conceptul de evaziunea fiscală, rezultare care sunt prezentate în tabelul (*Tabel 3*).

În ceea ce priveşte ţările, respectiv regiunile care apar cele mai multe publicaţii sunt prezentate în tabelul (*Tabel 4*).

Statele Unite ale Americii, Marea Britanie, Italia şi Germania reprezintă tarile cu publicaţiile cele mai multe in domeniul evaziunii fiscal. În topul ţărilor cu un aport considerabil în ceea ce priveşte acest domeniu de cercetare se numără şi Republica Cehă, Spania, Brazilia, Austria, Canada, Polonia. În ceea ce priveşte România, aceasta a contribuit la abordarea tematicii evaziunii fiscale prin intermediul celor 11apariţii în documentele de specialitate identificate în momentul interogării bazei de date Scopus. Astfel, preocuparea pentru cercetarea în domeniul fenomenului evaziunii fiscale există la nivel global, dovadă fiind rezultatele cercetării autorilor din toate zonele academice (*Figura 2*).

În tabelul 5 redăm lista principalilor autori care au manifestat interes pentru cercetarea în domeniu evaziunii fiscale în perioada analizată. Ei sunt prezentaţi în ordinea descrescătoare a numărului de citări din literatura de specialitate (*Tabel 5*).

Pasul următor a constat în exportarea celor 862 de rezultate generate din domeniul ştiinţe sociale în urma aplicării protocolului de căutare pe platforma Scopus, în format csv ce conţine următoarele informaţii: autorul, titlu şi rezumatul (abstractul).

Fişierul astfel obţinut a fost importat în softul VOSviewer în vederea efectuării analizei referitoare la asocierea de termeni şi la identificarea celor mai frecvente cuvinte şi sintagme utilizate în cuprinsul cercetărilor din domeniul evaziunii fiscale.

Analiza cantitativă bibliometrică presupune, de asemenea, studierea situaţiei colaborării dintre autori din tari diferite, preocupaţi de tematica fenomenului evaziunii fiscale. Pentru a putea interpreta datele, se va utiliza harta generată de către produsul software VOSviewer. Harta a fost concepută pe baza următoarelor criterii:

- Unitatea de analiză: Autorii;
- Metoda de cuantificare: Numărare;
- Au fost ignorate documentele ştiinţifice în cazul în care au avut autori din mai mult de 25 de tari;
- S-a setat un prag minim de 5 lucrări având sursa în acelaşi stat.

Dimensiunea nodurilor corespunzătoare fiecărui stat desemnează relevanţa acestuia în cercetarea pe tema specificată. Grosimea curbelor şi distanţa dintre noduri semnifică legătura de colaborare dintre autori.

Reprezentarea grafică (*Figura 3*) redă reţeaua de legătură dintre autori în funcţie de statul din care provin, bazată pe coautorat şi dezvăluie cinci grupuri (clustere) de state colorate diferit ce au în comun legăturile dintre autorii de studii asupra temei evaziunii fiscale în sensul colaborării ştiinţifice dintre aceştia (grupurile sunt formate în funcţie de intensitatea legăturii de colaborare), astfel:

Ţara cea mai relevantă din punctul de vedere al colaborării internaţionale este reprezentată de Statele Unite ale Americii, care aparţin celui de-al doilea grup, colorat cu mov şi este reprezentat şi de ţările Israel, China, Finlanda. Autorii americani au colaborat preponderent în cercetarea lor cu autori şi instituţii din Marea Britanie, Turcia, Slovacia. Autorii români au avut relaţii de colaborare cu alţi autori din Franţa, Brazilia, Danemarca, USA, Canada, Norvegia.

Pe baza datelor prezentate mai sus, rezultă faptul că 11 de lucrări ce abordează evaziunea fiscală au autori români. Am remarcat, totodată, legături de colaborare ştiinţifică între autori

localizaţi în colţuri diferite ale lumii, Africa de Sud, de pildă, este conectată sub acest aspect cu state ca Marea Britanie sau Statele Unite ale Americii.

Apoi, s-a propus studierea distribuţiei celor mai intens utilizate cuvinte-cheie cu intenţia de a observa şi analiza legăturile dintre acestea, luându-le în considerare doar pe cele propuse de autori în lucrările publicate, şi am setat un prag minim de 5 apariţii simultane. Din totalul de 862 lucrări au fost identificate 1.320 de cuvinte-cheie, iar dintre acestea, 68 se situează peste pragul minim (beneficiază de cele 5 de apariţii simultane). Am selectat primele 20 de cuvinte-cheie a căror forţă de legătură cu alte cuvinte-cheie este cea mai ridicată, prin urmare apariţia lor împreună este cea mai relevantă.

Figura 4 demonstrează relevanţa celor mai importante cuvinte-cheie identificate în eşantionul studiat prin analiza intensităţii legăturii cu alte cuvinte-cheie sub aspectul apariţiei simultane în aceeaşi lucrare (*Figura 4*).

Analizând cu atenţie figura 4, rezultă faptul că cele mai relevante cuvinte-cheie sunt în limba engleză, prin prisma faptului că majoritatea publicaţiilor care tratează problematica evaziunii fiscale sunt redactate în limba engleză (*Figura 4*). Grupurile de cuvinte-cheie care sunt în legătură unul cu celălalt (apar simultan în aceeaşi lucrare) sunt reprezentate grafic cu aceeaşi culoare.

Relevanţa fiecărui cuvânt-cheie este redată cu ajutorul unor noduri (clustere) a căror dimensiune indică gradul de importanţă: cu cât nodul (clusterul) este mai mare, cu atât termenul pe care îl reprezintă este mai relevant în cadrul eşantionului. Legăturile dintre două noduri care sunt reprezentate grafic prin curbe, redau frecvenţa de apariţie a celor doi termeni pe care îi conectează: cu cât linia curbă de legătură este mai groasă, cu atât apariţia simultană a celor două cuvinte-cheie unite de respectiva linie este mai frecventă.

De asemenea, cu cât curba de legătură este mai scurtă, cu atât cei doi termeni pe care îi uneşte au o relaţie mai puternică. Am obţinut astfel grupul de culoare verde care conţine cuvintele cheie tax evasion, transfer pricing, shadow economy, underground economy, tax planing.

Concluzii

Analizând datele din literatura de specialitate, reiese faptul că indicatorii scientometrici sunt importanţi în analiza cercetării ştiinţifice, această lucrare a presupus elaborarea unei analize bibliometrice (metodă de cercetare de tip cantitativ), cu ajutorul informaţiilor obţinute în urma interogării bazei de date existente în platforma Scopus.

Datele au fost integrate şi prelucrate în produsul software VOSviewer. Acesta a facilitat obţinerea următoarelor rezultate ale cercetării:

• Interesul în zona cercetării ştiinţifice asupra fenomenului evaziunii fiscal a atins cote maxime in anul 2021, raportat la perioada 2010-2022, atunci când au fost publicate 121 de publicaţii în baza de date Scopus;

• Ţara cu cele mai multe documente ştiinţifice publicate în domeniul cercetărilor cu privire la studierea evaziunii fiscal este SUA 97 publicaţii, urmată îndeaproape de Marea Britanie cu un un număr de 96 de publicaţii, iar România are la bază 11 publicaţii în baza de date Scopus, la momentul interogării platformei;

- Cuvintele sau structurile de cuvinte ce s-au regăsit cel mai intens în documente ştiinţifice cu tematica „tax evasion" sunt următoarele: tax evasion. transfer pricing, shadow economy, underground economy, tax planing, tax administration.

Datorită acestei analize bibliometrice s-a putut determina producţia ştiinţifică legată de evaziunea fiscală la nivel global, unde s-a putut confirma o oarecare absenţă a conţinutului legat de subiect în ţara noastră, România. Din acest motiv, considerăm că acest studiu este un instrument de referinţă pentru cercetările viitoare în diferite cariere ale instituţiilor de învăţământ superior la nivel naţional şi local, având în vedere contextul socioeconomic din România.

Având în vedere că analiza bibliometrică aplicată în acest articol are limitele sale, concluzionăm că acest studiu este o sursă utilă de informare şi referinţă pentru cercetările viitoare în domeniile economiei şi finanţelor în materie de evaziune, în special pentru studii ulterioare pe această temă.

Ca o limitare cercetării noastre putem aminti faptul că a fost analizat doar materiale bibliografice (862 de înregistrări) conform rezultatelor obţinute prin căutarea efectuată pe platforma Scopus, din categoria Document, Titlu, Abstract, în perioada aferentă 2010-2022. Astfel, o parte semnificativă a literaturii de cercetare relevante, precum şi alte contribuţii la acest domeniu nu sunt incluse.

Studiul descrie evoluţia şi tendinţele de cercetare în domeniul evaziunii fiscale, dar nu poate oferi predicţii sau să explice interesul autorilor pentru acest concept. Astfel, suntem de părere că este necesară o aprofundare a analizei prin luarea în considerare a factorilor care determină aceste tendinţe, astfel încât cercetarea să ofere o utilitate sporită.

Bibliografie:

Abdullah, A., Waemustafa, W., & Mat Isa, H. (2017). Disclosure of Information in Company's Annual Reports: A Bibliometric Analysis. *Conference Proceedings*, *2*(2), 66.

Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, *11*(4), 959-975.

Bornmann, L., & Leydesdorff, L. (2014). Scientometrics in a changing research landscape: Bibliometrics has become an integral part of research quality evaluation and has been changing the practice of research. *EMBO Reports*, *15*(12), 1228-1232. DOI: 10.15252/embr.201439608.

Diekmann, A., Näf, M., & Schubiger, M. (2012). Die Rezeption (Thyssen-)preisgekrönter Artikel in der „Scientific Community". *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie*, *64*(3), 563-581. DOI: 10.1007/s11577-012-0175-4.

Eck, N.J. van, & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, *84*(2), 523-538. DOI: 10.1007/s11192-009-0146-3

Egghe, L., & Rousseau, R. (1990). *Introduction to informetrics: Quantitative methods in library, documentation and information science*. Elsevier Science Publishers.

Garfield, E. (n.d.). *Is citation analysis a legitimate evaluation tool?* 17.

Guamán Pinchao, J.D. (2013). *Elusión tributaria en la legislación ecuatoriana*.

Hulme, E.W. (1923). *Statistical bibliography in relation to the growth of modern civilization*.

Jacinto, R.A.P., Gómez, S.T.M., Ortiz, D.A.Q., & Montenegro, J.D. (2019). Evasión tributaria, una revisión. *Revista Activos*, *17*(1), 167-194.

Karanatsiou, D., Misirlis, N., & Vlachopoulou, M. (n.d.). *Bibliometrics and Altmetrics literature review: Performance indicators and comparison analysis*. 21.

Leung, K. (2007). The glory and tyranny of citation impact: An East Asian perspective. *Academy of Management Journal*, *50*(3), 510-513.

Moed, H.F. (2005). Implications for the Use of Citation Analysis in Research Evaluation. *Citation Analysis in Research Evaluation*, 221-225.

Montano Barbuda, J.J., & Vásquez Pacheco, F. (2016). *Causas de la evasión tributaria y su efecto en la economía del Perú 2014*. Rubro servicios.

Pouris, A. (2016). A bibliometric assessment of energy research in South Africa. *South African Journal of Science*, *112*(11-12), 1-8.

Pritchard, A. (1969). Statistical bibliography or bibliometrics. *Journal of Documentation*, *25*, 348.

Raan, A.F.J. van (2005). For Your Citations Only? Hot Topics in Bibliometric Analysis. Measurement: Interdisciplinary *Research & Perspective*, *3*(1), 50-62. DOI: 10.1207/s15366359mea0301_7

Repanovici, A. (2011). *Measuring the visibility of the university's scientific production through scientometric methods: An exploratory study at the Transilvania University of Brasov, Romania. Performance Measurement and Metrics*. Romania.

Scopus date. Retrieved October 10, 2022, from https://www-scopus-com.am.e-nformation.ro/search/form.uri?display=basic#basic

Scopus Platform. Retrieved October 10, 2022, from https://www-scopus.com.am.enformation.ro/search/form.uri?display=basic#basic

Waltman, L., & Van Eck, N.J. (2013). A smart local moving algorithm for large-scale modularity-based community detection. *The European Physical Journal B*, *86*(11), 1-14.

Washco Castro, T.L. (2015). *Análisis de las reformas tributarias e incidencia en la recaudación de los principales impuestos del ecuador. 2009-2013*.

Weingart, P. (2005). Impact of bibliometrics upon the science system: Inadvertent consequences? *Scientometrics*, *62*(1), 117-131. DOI: 10.1007/s11192-005-0007-7

Aplicaţii

Tabel nr. 1. Rezultate interogare referitoare la evaziunea fiscală cu ajutorul Biblioshiny for bibliometrix, în baza de date Scopus (Sursă: prelucrare proprie)

Description	Results
Documents	862
Sources (Journals, Books, etc.)	474
Keywords Plus (ID)	1454
Author's Keywords (DE)	2086
Period	2010 - 2022
Average citations per documents	13,17
Authors	1789
Author Appearances	2220
Authors of single-authored documents	187
Authors of multi-authored documents	1602
Single-authored documents	221
Documents per Author	0,482
Authors per Document	2,08
Co-Authors per Documents	2,58
Collaboration Index	2,5
Document types	
ARTICLE	775
BOOK	7
BOOK CHAPTER	18
CONFERENCE PAPER	20
EDITORIAL	5
ERRATUM	4
NOTE	1
REVIEW	32

Tabel 2. Rezultate interogare referitoare la evaziunea fiscală platforma SCOPUS după anul publicaţiei (Sursă: prelucrare proprie)

Nr. crt.	Anul publicaţiilor	Numărul publicaţiilor/an	Publicaţii cumulate/an	Procent publicaţii/an
1	2010	28	28	3,25
2	2011	15	43	4,99
3	2012	40	83	9,63
4	2013	34	117	13,57
5	2014	70	187	21,69
6	2015	55	242	28,07
7	2016	74	316	36,66
8	2017	66	382	44,32
9	2018	63	445	51,62
10	2019	100	545	63,23
11	2020	103	648	75,17
12	2021	121	769	89,21
13	2022	93	862	100,00
	Total	862		

Tabel 3. Rezultate interogare referitoare la evaziunea fiscală în baza de date SCOPUS după impactul surselor de cercetare (Sursă: proiecția autorului)

Source	h_index	g_index	m_index	TC	NP	PY_start
INTERNATIONAL TAX AND PUBLIC FINANCE	10	23	0,833333333	529	23	2011
JOURNAL OF ECONOMIC BEHAVIOR AND ORGANIZATION	11	22	1	488	22	2012
JOURNAL OF PUBLIC ECONOMICS	12	19	1	398	20	2011
JOURNAL OF ECONOMIC PSYCHOLOGY	13	17	1	581	17	2010
SUSTAINABILITY (SWITZERLAND)	4	6	1	47	14	2019
ACTA UNIVERSITATIS AGRICULTURAE ET SILVICULTURAE MEND	3	4	0,25	23	11	2011
PUBLIC FINANCE REVIEW	4	10	0,307692308	134	10	2010
TOBACCO CONTROL	6	10	0,5	578	10	2011
ECONOMIC RESEARCH-EKONOMSKA ISTRAZIVANJA	4	6	0,4	40	9	2013
JOURNAL OF BUSINESS ETHICS	7	9	0,583333333	278	9	2011
ECONOMIC ANALYSIS AND POLICY	5	8	0,454545455	72	8	2012
PLOS ONE	5	8	0,454545455	130	8	2012
CESIFO ECONOMIC STUDIES	4	5	0,444444444	29	7	2014
AMERICAN ECONOMIC JOURNAL: ECONOMIC POLICY	4	6	0,307692308	456	6	2010
EUROPEAN ECONOMIC REVIEW	4	6	0,444444444	49	6	2014
EUROPEAN JOURNAL OF POLITICAL ECONOMY	4	6	0,307692308	175	6	2010
APPLIED ECONOMICS LETTERS	3	4	0,272727273	17	5	2012
COGENT BUSINESS AND MANAGEMENT	3	5	0,6	27	5	2018
COMBATING FISCAL FRAUD AND EMPOWERING REGULATORS:	1	1	0,5	4	5	2021
ECONOMIC MODELLING	4	5	0,333333333	70	5	2011

Tabel 4. Rezultate interogare publicații cu referire la evaziunea fiscală în baza de date SCOPUS Ţări/Regiuni (Sursa: proiecția autorului)

Country	Articles	Freq	SCP	MCP	MCP_Ratio
USA	97	0,13897	64	33	0,34
UNITED KINGDOM	86	0,12321	49	37	0,43
ITALY	63	0,09026	39	24	0,381
GERMANY	55	0,0788	40	15	0,273
CZECH REPUBLIC	27	0,03868	26	1	0,037
SPAIN	22	0,03152	19	3	0,136
BRAZIL	20	0,02865	19	1	0,05
CHINA	19	0,02722	14	5	0,263
FRANCE	19	0,02722	9	10	0,526
AUSTRIA	18	0,02579	9	9	0,5
NETHERLANDS	17	0,02436	12	5	0,294
CANADA	15	0,02149	8	7	0,467
POLAND	15	0,02149	11	4	0,267
SOUTH AFRICA	15	0,02149	11	4	0,267
INDONESIA	11	0,01576	9	2	0,182
PORTUGAL	11	0,01576	4	7	0,636
ROMANIA	11	0,01576	5	6	0,545
INDIA	10	0,01433	9	1	0,1
NORWAY	10	0,01433	8	2	0,2
SLOVAKIA	10	0,01433	8	2	0,2
NIGERIA	9	0,01289	9	0	0
SERBIA	9	0,01289	6	3	0,333
AUSTRALIA	8	0,01146	5	3	0,375

CROATIA	7	0,01003	7	0	0
GREECE	7	0,01003	5	2	0,286
SWEDEN	7	0,01003	6	1	0,143
BELGIUM	6	0,0086	3	3	0,5
DENMARK	6	0,0086	4	2	0,333
BANGLADESH	5	0,00716	2	3	0,6
MALAYSIA	5	0,00716	5	0	0
SWITZERLAND	5	0,00716	4	1	0,2
TAIWAN	5	0,00716	4	1	0,2
UKRAINE	5	0,00716	4	1	0,2
JAPAN	4	0,00573	4	0	0
TURKEY	4	0,00573	1	3	0,75
ALBANIA	3	0,0043	3	0	0
HUNGARY	3	0,0043	3	0	0
KOREA	3	0,0043	3	0	0
MEXICO	3	0,0043	2	1	0,333
ARGENTINA	2	0,00287	1	1	0,5
BULGARIA	2	0,00287	2	0	0
COLOMBIA	2	0,00287	1	1	0,5
FINLAND	2	0,00287	2	0	0
HONG KONG	2	0,00287	0	2	1
IRAN	2	0,00287	2	0	0
ISRAEL	2	0,00287	1	1	0,5
JORDAN	2	0,00287	1	1	0,5
LITHUANIA	2	0,00287	2	0	0
NEW ZEALAND	2	0,00287	2	0	0
PAKISTAN	2	0,00287	0	2	1
TUNISIA	2	0,00287	0	2	1
AZERBAIJAN	1	0,00143	0	1	1
BELARUS	1	0,00143	1	0	0
BURKINA FASO	1	0,00143	1	0	0
CYPRUS	1	0,00143	0	1	1
ECUADOR	1	0,00143	1	0	0
GHANA	1	0,00143	1	0	0
IRELAND	1	0,00143	1	0	0
KUWAIT	1	0,00143	0	1	1
LIECHTENSTEIN	1	0,00143	1	0	0
MOROCCO	1	0,00143	1	0	0
NAMIBIA	1	0,00143	0	1	1
NEPAL	1	0,00143	1	0	0
PHILIPPINES	1	0,00143	1	0	0
SAUDI ARABIA	1	0,00143	1	0	0
SINGAPORE	1	0,00143	0	1	1
SLOVENIA	1	0,00143	1	0	0
THAILAND	1	0,00143	0	1	1

UGANDA	1	0,00143	1	0	0
ZIMBABWE	1	0,00143	1	0	0

Tabel 5. Principalii autori de lucrări științifice având ca temă de cercetare evaziunea fiscal (Sursă: proiecția autorului)

| Autor	h_index	g_index	m_index	TC	NP	PY_start
WILLIAMS CC	13	22	1,444	519	24	2014
ALM J	13	22	1	1071	22	2010
KIRCHLER E	7	13	0,538	295	13	2010
HORODNIC IA	7	9	0,875	280	9	2015
RABLEN MD	5	8	0,385	85	8	2010
CERQUETI R	4	6	0,333	81	6	2011
GOERKE L	3	6	0,25	37	6	2011
MALZIEUX A	4	6	0,667	40	6	2017
RIXEN T	4	6	0,364	50	6	2012
ROSS H	4	6	0,4	40	6	2013
UNGER B	2	2	1	7	6	2021
FERWERDA J	1	1	0,333	4	5	2020
JOHANNESEN N	3	5	0,333	220	5	2014
MCKEE M	3	5	0,231	170	5	2010
MITTONE L	4	5	0,571	65	5	2016
SLEMROD J	4	5	0,444	90	5	2014
TORGLER B	4	5	0,308	363	5	2010
ARSI M	2	4	0,25	17	4	2015
BERTOTTI ML	4	4	0,444	36	4	2014
BLAUFUS K	3	4	0,375	36	4	2015

Documents by year
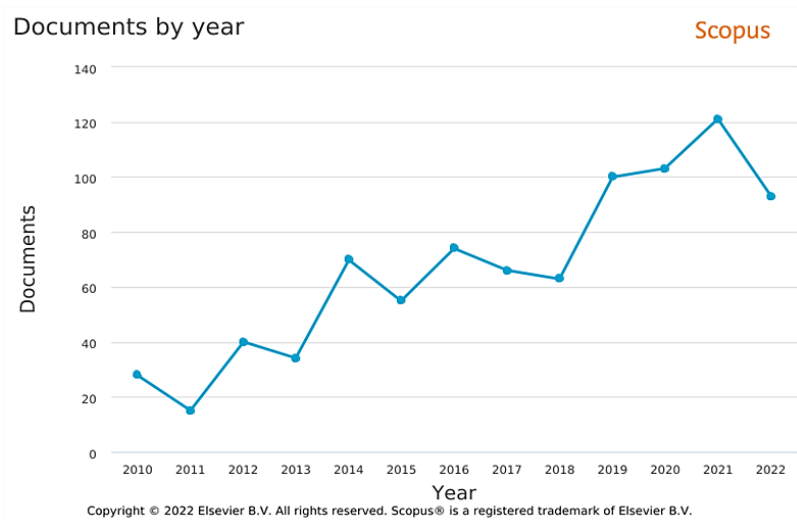
Scopus

Figura 1 Rezultate interogare referitoare la evaziunea fiscală platforma SCOPUS după anul publicaţiei (Sursă: proiecţia autorului)
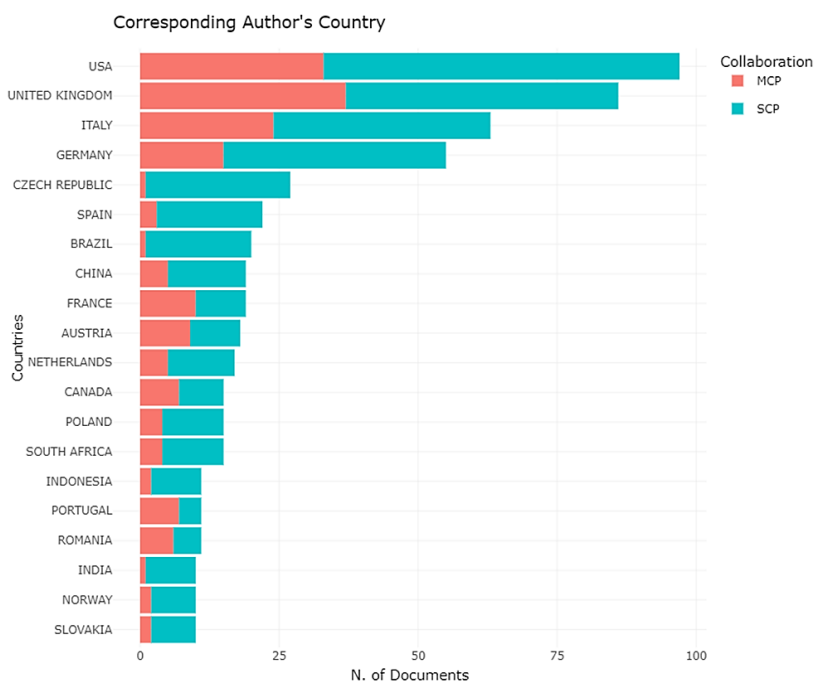

Figura 2. Rezultate interogări publicaţii ştiinţifice pe ţări care studiază evaziunea fiscală, în baza de date Scopus (Sursa: Conceptualizare proprie, în urma prelucrării datelor cu ajutorul Bibliometrix)
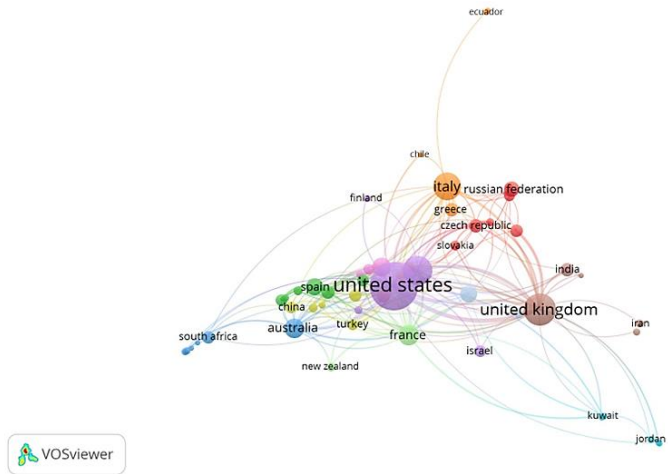
Figura 3. Rețeaua de legătură dintre autori corespunzător țărilor lor de origine (Sursa: Prelucrarea autorului cu ajutorul programului VOSviewer)
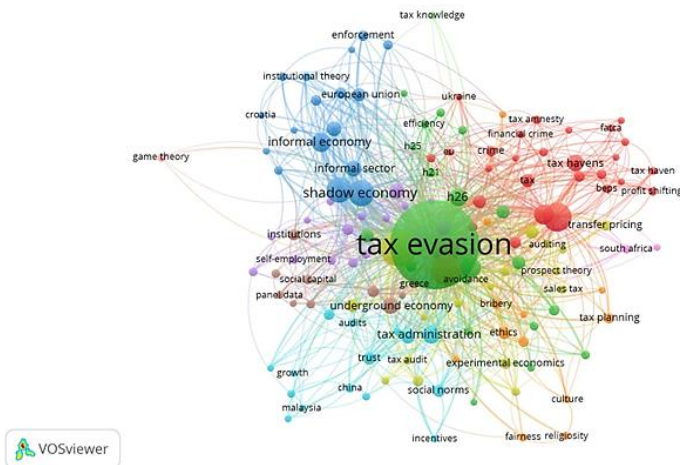

Figura 4. Rețeaua de legătură dintre cuvintele-cheie privind evaziunea fiscală în documente analizate (Sursa: Prelucrarea autorului cu ajutorul programului VOSviewer)

Viktoriia Kolomiiets, Doctor of Economics, Associate Professor, Professor of Accounting and Economic Analysis, Melitopol Institute of Public and Municipal Administration, Classic Private University. Melitopol, Ukraine. ORCID 0000-0003-3427-8986.

Specific functioning of human capital of the medical industry

Abstract: The peculiarity of this study is a comprehensive look at the chosen topic from the standpoint of economics, psychology, and medicine. The qualitative characteristics of human capital in the medical industry differ from those already defined in other industries. The medical industry and human capital are seen as areas of constant development. They require systematic analysis, careful study by scientists, acquisition of new knowledge. This study is aimed at determining the specifics of the functioning of human capital in the medical industry. This will make it possible to analyze the human capital of the medical field and propose directions for its development and improvement of its competence. Characteristic and specific features of the medical field have been studied. It is emphasized that the state of the medical industry is noted as negative. Funding of the medical industry is insufficient. The medical industry works as a single space with close connections between the population, employers, and the state budget. The specificity of the functioning of the human capital of the medical industry is determined by the specified features of the health care system, the internal and external environment of the medical industry. Accordingly, human capital belongs to the medical field and has specific features, functions in an internal industry environment with certain characteristics. The study made it possible to determine the specifics of the functioning of human capital in the medical field in the next points: psychological stress, high degree of responsibility, intensive work; violation of the physiological state of medical personnel; professional burnout; the development of human capital in the medical industry requires the automation of the workplaces of the personnel of the medical organization, the improvement of the level of information support of medical workers; inconsistency in the tasks of structural restructuring of the health care system; low degree of social protection of medical personnel; the need for continuous professional growth of medical personnel; the need to introduce new payment methods; using the joint responsibility of medical professionals and the medical community to each other.

Keywords: human capital, human capital of the medical industry, medical industry, medical personnel.

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Специфіка функціонування людського капіталу медичної галузі

Анотація: Особливість даного дослідження полягає у всебічному погляді на обрану тематику з позицій економіки, психології та медицини. Якісні характеристики людського капіталу медичної галузі відрізняються від стало визначених в інших галузях. Медична галузь та людський капітал вбачаються як сфери постійного розвитку. Потребують системного аналізу, прискіпливого вивчення з боку науковців, набуття нових знань. Дане дослідження цілеспрямоване на визначення специфіки функціонування людського капіталу медичної галузі. Це надасть змогу проаналізувати людський капітал медичної галузі та запропонувати напрямки його розвитку, підвищення його компетентності. Досліджено характерні та специфічні риси медичної галузі. Підкреслено, що стан медичної галузі відзначається як негативний. Фінансування медичної галузі недостатнє.

Медична галузь працює як єдиний простір з тісними зв'язками між населенням, працедавцями, державним бюджетом. Специфіка функціонування людського капіталу медичної галузі обумовлена означеними особливостями системи охорони здоров'я, внутрішнім та зовнішнім середовищем медичної галузі. Відповідно, людський капітал, що належить до медичної галузі, має специфічні риси, функціонує во внутрішньому галузевому середовищі з визначеними особливостями. Дослідження дозволило обумовити специфіку функціонування людського капіталу медичної галузі в наступному: психологічні навантаження, висока ступінь відповідальності, інтенсивна праця; порушення фізіологічного стану медичного персоналу; професійне вигорання; розвиток людського капіталу медичної галузі потребує автоматизації робочих місць персоналу медичної організації, підвищення рівня інформаційного забезпечення медичних працівників; невідповідність завдань структурної перебудови системи охорони здоров'я; низький ступінь соціального захисту медичного персоналу; необхідність безперервного підвищення кваліфікації медичного персоналу; необхідність впровадження нових методів оплати праці; використання солідарної відповідальності медичних працівників та медичної спільноти перед один одним.

Ключові слова: людський капітал, людський капітал медичної галузі, медична галузь, медичний персонал.

Introduction

Research on human capital has developed widely in recent years. Allocation into a separate category, classification, institutionalization of the concept attracts the attention of scientists. But experiments at the intersection of sciences become the most attractive.

These are a combination of theoretical hypotheses, practical experience, systematic analysis of the economic, psychological, and medical profile of human capital in the medical field.

"Observations at the world level bring analytical considerations about the progress of humanity beyond the framework of economic growth, firmly assigning a person and his well-being a central place in the politics and strategy of development" (*Jahan et al., 2018:2*).

"Today, the priority in the effective management of resources is given to human capital, because it represents a stock of knowledge, skills, competencies and abilities of people that allow creating private, social and national well-being" (*Freeman & Freeman, 2018*).

The qualitative characteristics of human capital in the medical industry differ from those already defined in other industries. Note that each branch has special and specific differences. There are also general qualitative characteristics of human capital widely applied to all branches of the national economy. But there are narrowly defined features for each industry, and perhaps sub-industry, separately according to their specifics.

Such a pronounced specific branch is the medical field.

Ukrainian developments in the field of human capital use and in medicine, in particular, are significant. They consist of works by O. Grishnova, E. Libanova, V. Mandybura, M. Semikinoi, A. Chuhno, studies by V. Antonyuk, S. Bandur, I. Bondar, S. Doroguntsov, A. Zhukovskaya, T. Zayats, M. Karlin, E. Kachan, V. Kozak, A. Kolot, Yu. Krasnova, L. Kryvenko, V. Lagutina, N. Lukyanchenko, V. Novikova, V. Onikienko, S. Pirozhkova, V. Savchenko, A. Tkacha, V. Yakubenko. Domestic and foreign scientists: S. Antonova, G. Bryadko, T. Brizhit, O. Vasylieva, O. Zhamkova, I. Lomakina, U. Luschyk examined the researches of the market

of medical services, improvement of health care management, innovative development of the medical industry, S. Mykhaylova, M. Samofach, S. Stetsenko, O. Chehun, V. Shevtsova, K. Stern, L. Shcherbachenko. The medical industry and human capital are seen as areas of constant development. They require systematic analysis, careful study by scientists, acquisition of new knowledge.

The qualitative development of human capital is considered a fundamental goal of Ukraine as a perfect state. Therefore, this study is aimed at determining the specifics of the functioning of human capital in the medical industry. This will make it possible to analyze the human capital of the medical field and provide proposals for its development and improvement of its competence.

Research results

Human capital is the most valuable and main resource of every state. And Ukraine is no exception. The government considers the development of human capital as one of the most important functions of the state and provides high-quality medical services.

"Creating the necessary basic conditions for a comfortable and safe life, opportunities to realize the potential of citizens is one of the most important functions of the state. It is the high-quality development of human capital that is the basis of the growth of the national economy and the strengthening of Ukraine's competitive position in the world. The main indicators of the effectiveness of the Government's work in this direction are an increase in the positions in the human development index, a decrease in the levels of mortality and poverty of the population. To achieve the priority goal – the sustainable development of human capital in Ukraine – a number of transformations in key social spheres, including in the field of health care, are foreseen: ensuring equal access of citizens to quality medical services by creating a new organization of the health care system based on the basis of medical insurance, reforming and improving medical care" (*Government portal…, 2021*).

The medical industry is characterized by the following features:

- the specificity of the manifestation of the results of medical care;
- health promotion, treatment is a priority of the country, a basic component of human capital;
- individual (regarding the person being treated) financial investments are in no way related to the obtained result and are unpredictable;
- the impossibility of objectively assessing the cost of medical services;
- psychological positive grounds for financing this area by a large number of investors;
- there is a large number of investors willing and able to finance – patient, family, enterprise, employer, charitable funds, insurance companies, the Red Cross organization, budgets of all levels, international funds and organizations;
- the duration of treatment, rehabilitation, health maintenance, leading a healthy lifestyle can cover a person's entire life;
- the professionalism and quality of professional staff in the medical field directly affects the effectiveness of medical services received by a person;
- a large number of donations instead of state funding of the industry;

- experts believe that 2/3 of the market in the honey industry is the shadow labor market;
- no taxes are paid from shadow cash flows. Thus, the state is significantly limited in tax revenues and financing of the industry;
- corruption turned out to be an integral element of the medical industry. "Invaluable human capital is directly involved on two sides of the problem: both as an object of struggle and as its subject. The peculiarity of thinking and mentality of the Ukrainian nation also leaves its mark and promotes corruption" [*Kolomiiets, 2019:62*; *Kolomiiets et al., 2021*);
- imperfect legislation, gaps in the legal regulation of the medical field;
- shortcomings of organizational and control mechanisms;
- socio-economic problems of the medical field that have not been resolved over the years;
- lack of a consistent and systematic approach in the fight against corruption in the medical field;
- underdevelopment of civil society institutions;
- civil irresponsibility and low level of citizens' ideology;
- insufficient transparency of the health care system as a whole, the efficiency of spending budget funds (lack of public and independent examination of the decisions made);
- the absence of real and effective mechanisms of public participation in the implementation of the integral principle of the state and public nature of the management of the health care system;
- significant abuse and excess of official authority;
- a wide field for fraud of a financial nature, committed by a person using his official position;
- receiving and giving bribes;
- the working time of doctors is shortened to 38.5 hours per week, for narrow specialists – 33 hours;
- modern forms of remuneration are aimed at applying individual wages, in its structure 30% permanent payment, 70% variable;
- in the cost of medical services, the salary is 30-35% (dentistry 20-25);
- prioritizing social and medical efficiency over economic efficiency (*Lectures, 2020:9*; *Radieva & Kolomiiets, 2019*);
- a high constant need for the existence and functioning of the industry forever at any time;
- the possibility of constant development of the industry, endless improvement of technologies.

Experts characterize the state of the medical industry as negative. "Currently, the Ukrainian health care system is in a critical state, which is confirmed by the results of international indices (human capital index, human development index, competitiveness index), low average life expectancy, high percentage of the population that cannot receive medical care in full, and low self-esteem of one's own health)" (*Zasorina, 2022:179*).

"The national health care system faced two very difficult problems – a catastrophic lack of resources and their irrational use, the creation and effective functioning of a unified medical space of Ukraine" (*Vasylenko et al., 2022:13*).

SEDA international index (analysis of the sustainability of the country's economic

development) (*Andronik, 2019:69*; *SEDA…, 2018*) for Ukraine, it has a value of 54.8 – quite low. The maximum value reached by the countries – 85.3.

In the conditions of martial law and the presence of COVID-19, the number of beds is reduced, doctors and nurses are involved in the treatment of military personnel and those affected by the disease of COVID-19. Therefore, the traditional processes of the medical field are not given the necessary attention.

Funding of the medical industry is insufficient (*Figure 1*).

Only 50-60% of the required amount of funding comes from the state budget.

State financing of the medical industry is divided into a number of expenses: 60% salary, 30% utilities, 10% patient needs (*Figure 2*).

The medical industry works as a single whole environment with close connections between the population – the employer – the state budget.

In the conditions of the current state of war, high-quality, affordable and timely medical care is provided to residents of communities and displaced persons. Health care facilities function during martial law.

The program "U-LEAD with Europe" provides for the use of the potential of internally displaced persons for the development of medical facilities, the conclusion of agreements with the National Health Care System and the provision of the medical field. Provision of medical and social assistance to displaced persons is being organized. In the meeting places of people evacuated from territories that are under occupation or in which hostilities are ongoing, a rotation of medical and social workers is organized (*Kolomiiets et al, 2021*; *Radieva & Kolomiiets, 2019*; *The functioning of the medical sphere…, 2022*).

The specificity of the functioning of the human capital of the medical industry is determined by the specified features of the health care system, the internal and external environment of the medical industry.

Accordingly, human capital belonging to the medical field has specific features, functions in an internal industry environment with certain characteristics.

The nature of human capital in the medical field is determined not only by the specifics of the medical field, but also by psychological stress, a high degree of responsibility, and labor intensity. Often this is intensive work without a break, 24 hours a day on duty, 48-64 hours of rest. This mode of work violates the physiological state of a person. At the same time, up to 80% of the medical staff (data of the author's study, *Figure 3*) work part-time during non-working hours in other medical institutions.

In turn, such a situation, psychological and physical stress lead to professional burnout. This is another negative feature of human capital in the medical field.

"The health care system is a strategic activity of the national economy, ensuring the reproduction of the population, social guarantees, the health of citizens... In modern economic conditions, medical services focused on the development of human capital are among the most important... They ensure a high level of physical and moral health of population. It, in turn, significantly affects the processes of economic growth not only at the individual level, but also at the macroeconomic level" (*Yanchak, 2018*).

The development of the human capital of the medical industry requires the automation of the workplaces of the personnel of the medical organization, the improvement of the level of

information support for the doctor, paraclinical structures and average medical workers.

The high productivity and efficiency of the medical industry is ensured by the labor resource. Inadequacy of the training of specialists to the needs of the practice of the medical field, the tasks of structural restructuring of the health care system, the low degree of social protection of medical personnel lead to a significant deterioration in the quality of medical care with a negative result of the medical service. Based on the above, there is a need to return to the referral of graduates of professional and higher educational institutions, continuous improvement of the qualifications of medical personnel, and the introduction of new methods of payment.

The specificity of the functioning of human capital in the medical field is focused on the use of administrative resources. The system of self-regulation of professional medical activity is not developed. The joint responsibility of medical workers before the medical community and feedback are practically absent. Territorial professional medical associations have not actually been created in Ukraine.

Researchers claim that existing professional medical associations and societies are not empowered and do not really affect the quality of medical care (*Freeman & Freeman, 2018:17*; *Yanchak, 2018*).

The study made it possible to determine the specifics of the functioning of human capital in the medical industry as follows:

- the nature of human capital is determined not only by the peculiarities of the medical field, but also by psychological stress, a high degree of responsibility, and labor intensity;
- the work regime of the medical staff violates the physiological state of a person;
- psychological and physical stress lead to professional burnout;
- the development of human capital in the medical industry requires the automation of the workplaces of the personnel of the medical organization, an increase in the level of information provision of medical workers;
- insufficient compliance of the training of specialists with the needs of practice in the medical field;
- inconsistency in the tasks of structural restructuring of the health care system;
- low degree of social protection of medical personnel;
- the need for continuous training of medical personnel;
- the need to introduce new payment methods;
- use of the required number of administrative resources;
- use of the joint responsibility of medical workers and the medical community to each other;
- the need to create territorial professional medical associations.

Conclusion

A pronounced specific branch is the medical field. In modern researches, experiments at the intersection of sciences become more and more attractive. These are a combination of theoretical hypotheses, practical experience, systematic analysis of the economic, psychological, and medical profile of human capital in the medical field.

The purpose of the research is to determine the specifics of the functioning of human

capital in the medical industry. The medical industry is characterized by a number of features. It was determined that the state of the medical industry is negative, funding is insufficient.

The specificity of the functioning of the human capital of the medical industry is determined by the features of the health care system determined in the study, and the internal and external environment of the medical industry. Accordingly, human capital belonging to the medical field has specific features, functions in an internal industry environment with certain characteristics.

The study made it possible to determine the specifics of the functioning of human capital in the medical industry. This will make it possible to analyze the human capital of the medical field and propose directions for its development and improvement of its competence.

References:

Andronik, O. (2019). Socio-economic development of Ukraine in the world ratings. [Sotsial'no-ekonomichnyy rozvytok ukrayiny u svitovykh reytynhakh]. *Internauka. Series: "Economic sciences"*, *3*(23), 66-70. DOI: 10.25313/2520-2294-2019-3-4822 (in Ukrainian)

Freeman, E.M., & Freeman, I.M. (2018). Human capital as a factor of enterprise competitiveness [Chelovecheskiy kapital kak faktor konkurentosposobnosti predpriyatiya]. *Skhidna Yevropa: ekonomika, biznes ta upravlinnya*, *2*(13), 150-153. (in Ukrainian)

Government portal. Development of human capital (2021). [Uryadovyy portal. Rozvytok lyuds'koho kapitalu]. Retrieved October 10, 2022, from https://www.kmu.gov.ua/diyalnist/reformi/rozvitok-lyudskogo-kapitalu (in Ukrainian)

Jahan, S. et al. (2018). Human Development Indices and Indicators: Updated Statistical Data 2018 etc. [Indeksy i indikatory chelovecheskogo razvitiya: Obnovlennyye statisticheskiye dannyye 2018 dr.]. Retrieved October 10, 2022, from http://hdr.undp.org/sites/default/files/2018_human_development_statistical_update_ru.pdf (in Ukrainian)

Kolomiiets, V. (2019). Struggle against corruption abuse as a means to ensure human capital institutionalization of human capital. *International scientific journal «Internauka». Series: «Economic sciences»*. 3 (23). 61-65. DOI: 10.25313/2520-2294-2019-3-4814

Kolomiiets, Y., Kolomiiets, V., & Radieva, M. (2021). Institutionalization of the transition to the use of alternative sources of energy. *Review of transport economics and management*, *6*(22), 41-47. DOI: 10.15802/rtem2021/261896

Lectures. Economics of health protection. Marketing of medical services (2020). [Lektsiyi. Ekonomika okhorony zdorovya. Marketynh medychnykh posluh]. Retrieved October 10, 2022, from https://vnz-mpu.com.ua/images/pdf/Лекції/Економіка_охорони_здоровя._Маркетинг_медични x_послуг/Лекції_2_3_4_5.pdf (in Ukrainian).

Radieva, M., & Kolomiiets, V. (2019). Factors of human capital modernization in the context of institutionalization of information economy. *Virtual Economics*, *2* (4), 26-45. DOI: 10.34021/ve.2019.02.04(2)

SEDA 2018: An Interactive Guide. (2018). Retrieved October 10, 2022, from

https://www.bcg.com/ru-ru/publications/interactives/seda-2018-guide.aspx

The functioning of the medical sphere in communities under martial law – U-LEAD experts provided an explanation (2022). [Funktsionuvannya medychnoyi sfery v hromadakh v umovakh voyennoho stanu – Eksperty U-LEAD nadaly roz'yasnennya]. Retrieved October 10, 2022, from https://decentralization.gov.ua/news/14930 (in Ukrainian)

Vasylenko, N., Semko, M., & Radysh, Y. (2022). The role of public administration in the formation of a new model of state regulation of health care: domestic and foreign experience. [Rol' publichnoho upravlinnya u formuvanni novoyi modeli derzhavnoho rehulyuvannya okhorony zdorov'ya: vitchyznyanyy ta zarubizhnyy dosvid]. *International Scientific Journal «Internauka». Series: "Economic Sciences", 8*(64). DOI: 10.25313/2520-2294-2022-8-8191 (in Ukrainian)

Yanchak, Y. (2018). Effective development and functioning of the market of medical services in the conditions of globalization and integration processes in health. [Efektyvnyy rozvytok ta funktsionuvannya rynku medychnykh posluh v umovakh hlobalizatsiyi ta intehratsiynykh protsesiv u okhoroni zdorov'ya]. 227-235. Retrieved October 10, 2022, from https://science.lpnu.ua/sites/default/files/journal-paper/2018/jun/13222/235.pdf (in Ukrainian)

Zasorina, H. (2022). Health care in the context of human capital development. [Okhorona zdorov'ya v konteksti rozvytku lyuds'koho kapitalu]. *Economics and Organization of Management, 2*(46), 171-182. DOI: 10.31558/2307-2318.2022.2.17. (in Ukrainian)
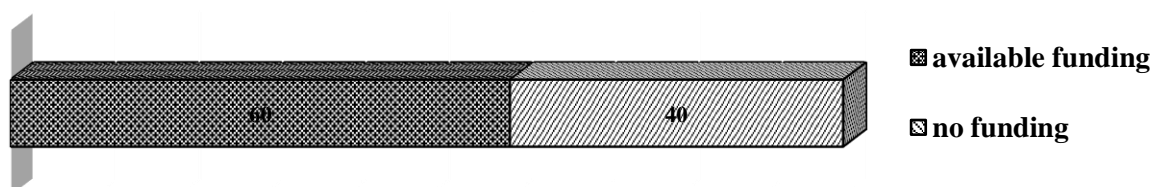
Appendix

Figure 1. Financing of the medical industry in Ukraine (official statistical sources of Ukraine)
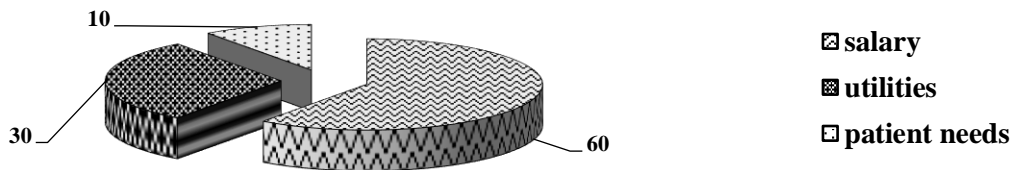
Figure 2. The structure of expenditures of the medical industry of Ukraine (official statistical sources of Ukraine)
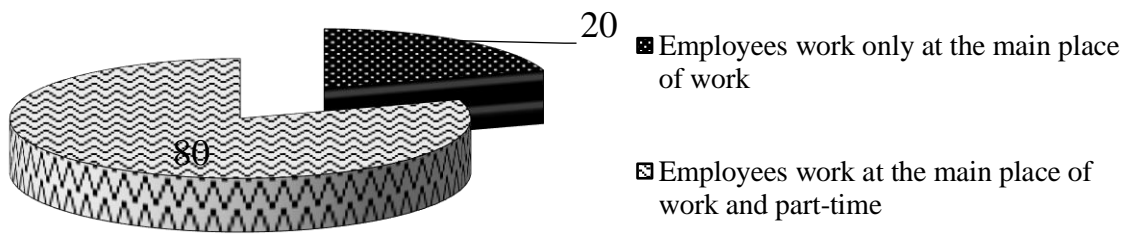

Figure 3. The structure of the involvement of the medical staff of Ukraine (compiled by the author on the basis of his own research)

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Analysis of the regional budget of the subject of the Russian Federation on the example of St. Petersburg

Abstract: The analysis of the budget of large urban systems is an important component of the general analysis of the state of the state economy. More than 5,376 million citizens officially live in St. Petersburg. Taking into account temporary residents and those who come to work from the suburbs, this number increases to 6.5 million people. The turnover of organisations in St. Petersburg by the end of 2021 amounted to more than 21,382 billion rubles, which is second only to the turnover of organisations in Moscow, one of the largest cities in the world. Retail trade turnover in January-December 2021 amounted to 1,875.4 billion rubles, which amounted to 4.78% of the retail trade turnover in the entire Russian Federation. The study purpose was to analyse the regional budget of the subject of the Russian Federation on the example of St. Petersburg. Analytical, logical, historical, comparative, and statistical research methods were applied to achieve the set goal and solve the problems. The study used both legislative and statistical material, as well as analytical work of researchers in statistics. The result of the study was an assessment of its financial stability using the V.V. Ivanov's method. This material will be useful for analysts, scientists, researchers and students working in the field of economic statistics and strategy and also to analyse the changes in the economy of St. Petersburg in the conditions of sanctions pressure.

Keywords: annual city budget, budget code, expenditure obligations, state internal debt, St. Petersburg.

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Анализ регионального бюджета субъекта Российской Федерации на примере Санкт-Петербурга

Аннотация: Анализ бюджета крупных городских систем является важным компонентом общего анализа состояния экономики государства. В Санкт-Петербурге официально проживает более 5,376 миллионов граждан. С учетом временно проживающих и тех, кто приезжает на работу с пригородов, это количество возрастает до 6,5 миллионов человек. Оборот организаций Санкт-Петербурга по итогам 2021 года составил более 21382 млрд. рублей, что уступает только обороту организаций Москвы, одного из крупнейших городов мира. Оборот розничной торговли за январь-декабрь 2021 года составил 1875,4 млрд. руб., что составило 4,78% от оборота розничной торговли во всей Российской Федерации. Целью исследование было проанализировать

региональный бюджет субъекта Российской Федерации на примере Санкт-Петербурга. Для достижения поставленной цели и решения задач были применены аналитический, логический, исторический, сравнительный и статистический методы исследования. В ходе исследования был использован как законодательный и статистический материал, так и аналитические работы исследователей в области статистики. Итогом исследования стало проведение оценки его финансовой устойчивости по методу В.В. Иванова. Данный материал будет полезен для аналитиков, учёных, исследователей и студентов, работающих в области экономической статистики и стратегии, а также для анализа изменений экономики Санкт-Петербурга в условиях санкционного давления.

Ключевые слова: бюджетный кодекс, государственный внутренний долг, годовой городской бюджет, расходные обязательства, Санкт-Петербург.

Introduction

The analysis of the budget of large urban systems is an important component of the general analysis of the state economy. In the Russian Federation for 2022 there are 15 cities with a population of more than 1 million people. Only two cities of these, Moscow and St. Petersburg, have a population of more than 2 million people. However, the total number of citizens, who live in these two megacities, is approximately from 12.7 to 14.5% of the total number of citizens of the Russian Federation. Consequently, the economic and legal model of development of each of these megapolis has great importance for describing the strategic vector of state development.

More than 5,376 million citizens officially live in St. Petersburg (*The results of the socio-economic development of St. Petersburg..., 2022:14*). Taking into account temporary residents and those, who come to work from the suburbs, this number increases to 6.5 million people. The turnover of St. Petersburg organisations by the end of 2021 amounted to more than 21382 billion rubles (*The results of the socio-economic development of St. Petersburg..., 2022:3*), which is second only to the turnover of organisations in Moscow, one of the largest cities in the world. Retail trade turnover in January-December 2021 amounted to 1875.4 billion. rubles, amounted to 4.78% of retail trade turnover in the entire Russian Federation (*Retail trade turnover in the Russian Federation..., 2022*).

The purpose of the study was to analyse the regional budget of the Russian Federation's subject on the example of St. Petersburg.

Based on the purpose of the study, the following tasks were developed and solved:
− monitor the legal framework and reports on the results of the St. Petersburg economic development;
− consider the St. Petersburg budget;
− analyse the main tax and non-tax sources of city budget revenues;
− analyse the main cost items of the city budget.

Analytical, logical, historical, comparative, and statistical research methods were applied to achieve the set goal and solve the problems.

The study used both legislative and statistical material, as well as analytical work of researchers in statistics.

This material will be useful for analysts, scientists, researchers, and students working in the field of economic statistics and strategy.

The results of the study

According to articles 11-12 of the Budget Code of the Russian Federation (*Budget Code of the Russian Federation No. 145-FZ, 1998*) (hereafter – RF's BC), the budgets of the subjects of the Russian Federation (hereinafter – the budgets of the RF' subjects or regional budgets) are developed and approved in the form of laws of the Russian Federation' subjects for the fiscal year, which lasts from January 1 to December31.

In accordance with article 14 of the RF's BC, each RF's subject has its own budget and the budget of the territorial state extra-budgetary fund. They are intended to fulfill the expenditure obligations of the RF's subject. The use by the state authorities of the RF's subjects of other forms of education and spending of funds to fulfill expenditure obligations of the RF's subjects is prohibited.

The budgets of the RF's subjects are compiled by items of expenditure and revenues according to the Russian Federation's budget classification, the principles of formation of which are set out in articles 18-21, 23-23.1 of the RF's BC (*Budget Code of the Russian Federation No. 145-FZ, 1998*) and specified by the order on the procedure for the formation and application of codes of the budget classification of the Russian Federation, their structure and principles of appointment (*Order of the Ministry of Finance of the Russian Federation No. 85n, 2019*).

The current St. Petersburg budget has been is compiled for a three-year perspective – for 2022 and for the 2023 and 2024 planning period. The budget was approved by the Law of St. Petersburg, which was adopted in the second reading on November 25, 2021 (*The Law of St. Petersburg No. 558-119, 2021*). Article 1 of this law sets out the main budget indicators for 2022-2024. For 2022, the St. Petersburg budget revenues and expenditures are projected in the amounts of 890.76 billion rubles and 971.51 billion rubles, respectively (the starting version of the previous year budget included amounts of 651.69 billion rubles and 741.35 billion rubles) (*Table 1*).

The St. Petersburg budget revenue part for 2022-2024 is given in the annex to the Law of St. Petersburg No. 558-119 (*Figure 1*), the analysis of which shows that the main share of revenues is consistently tax revenues – more than 91%; non-tax revenues provide about 5% of budget revenues, and more than 3% of regional revenues comes from gratuitous receipts. Attribution of revenue items to tax and non-tax revenues, as well as gratuitous receipts is determined by part 2-4 of article 41, article 55-57 of the RF's BC. Data on the volume and structure of the St. Petersburg budget revenue part are given in the appendix (*Table 2*; *Figure 1*).

The main sources of city budget tax revenues include taxes on the revenues of individuals and on the organisations' profits, as well as tax levied in connection with the application of the simplified taxation system. In the medium term, it is planned to increase revenues tax revenues in absolute terms from 645.9 billion rubles in 2022 to 777.4 billion rubles in 2024, with the relative invariance of the share of the article in the total amount of tax revenues – 79.4% in 2022, 79.7% in 2023 and 80% in 2024. The state duty and payments for the using natural resources are the least significant items of revenues, providing 0.23% and 0.001% of the St. Petersburg budget tax revenues, respectively, which in absolute terms amounts to 1.9 billion

rubles and 8 million rubles. This structure of tax revenues will be maintained in the medium term (*Table 2*; *Figures 2, 3*).

The main sources of tax revenues of the city budget include taxes on the revenues of individuals and on the profits of organizations, as well as tax levied in connection with the application of the simplified taxation system. In the medium term, it is planned to increase income tax revenues in absolute terms from 645.9 billion rubles in 2022 to 777.4 billion rubles in 2024, with the relative invariance of the share of the article in the total amount of tax revenues – 79.4% in 2022, 79.7% in 2023 and 80% in 2024. The state duty and payments for the use of natural resources are the least significant items of revenues, providing 0.23% and 0.001% of the tax revenues of the budget of St. Petersburg, respectively, which in absolute terms amounts to 1.9 billion rubles and 8 million rubles.. This structure of tax revenues will be maintained in the medium term (*Table 2*; *Figures 2-4*).

The main non-tax revenues of the budget of St. Petersburg are:

- revenues from the use of property owned by the state and municipal – 39.3% in 2022 with a downward trend to 37.1% in 2024, at the same time, in absolute terms, these revenues will grow from 17.5 million rubles in 2022 to 19.5 million rubles in 2024, in the total amount of revenues, the article takes about 2%;

- fines, sanctions, damages – with a tendency to increase in relative (21.9% in 2022 to 25.3% in 2024) and absolute (9.8 billion rubles in 2022 and 13.2 billion rubles in 2024) terms, but in the overall revenue structure, the article does not matter much (about 1%);

- revenues from the sale of tangible and intangible assets form 19.6% of budget revenues with a downward trend by 2024 in absolute (up to 6.4 billion rubles) and relative (up to 12.2%) terms;

- revenues from the provision of paid services and compensation of government costs form 18.7% of budget revenues in 2022 and tend to increase in 2024 to 24.9% in relative terms and up to 13 billion rubles in absolute terms (*Table 2*; *Figures 5-7*).

Gratuitous receipts make up 3.7% of the total regional budget revenues in 2022-2023, with a planned reduction in their share to 2.5% in 2024.

Taking into account article 84 of the RF's BC, the formation of expenditures of regional budgets is performed according to the expenditure obligations of the RF's subject, i.e., the obligations of the RF's subject to provide funds from the regional budget to an individual or legal entity, another public legal entity, a subject of international law.

Expenditure obligations of a RF's subject arise as a result according to Part 1 of Article 85 of the RF's BC (*Budget Code of the Russian Federation No. 145-FZ, 1998*):

1) adoption of laws and/or other regulatory legal acts of the RF's subject, conclusion of contracts (agreements) on behalf of the RF's subject in the exercise of powers by the state authorities of the RF's subjects

- on the topics of the RF's subjects,
- on the topics of joint jurisdiction specified in paragraphs 2 and 5 of article 26.3 on the General Principles of the Organisation of Legislative (Representative) and Executive bodies of State Power of the Russian Federation's Subjects (*Federal Law No. 184-FZ, 1999*),

- transferred to the RF's subjects from the Russian Federation;

2) conclusion of contracts (agreements) on behalf of the RF's subject by state institutions of the RF's subject;

3) the adoption of laws and (or) other regulatory legal acts of the RF's subject, providing for the provision of inter-budgetary transfers from the budget of the RF's subject.

In order to account for expenditure obligations, RF's subjects are required to keep registers of expenditure obligations, i.e., a set (list) of regulatory legal acts, municipal legal acts that determine public regulatory obligations and/or legal grounds for expenditure obligations, indicating the relevant provisions of laws and other regulatory legal acts, municipal legal acts with an assessment of the volume of budget allocations, necessary for the fulfillment of obligations included in the register in accordance with Parts 1-2 of Article 87 (*Budget Code of the Russian Federation No. 145-FZ, 1998*). The procedure for maintaining the Register of Expenditure Obligations of St. Petersburg is established by the Resolution No. 1007 (*Resolution of the St. Petersburg Government No. 1007, 2005*). According to paragraph 2 of the Resolution, the register is maintained by the St. Petersburg Finance Committee.

When expenditure obligations are included in the budget of the corresponding fiscal year, they are called "budget obligations".

The expenditure part of the budget of St. Petersburg is formed by the managers of budget funds and by expenditure items, according to annexes 2 and 3 of the Law (*The Law of St. Petersburg No. 558-119, 2021*).

The managers of funds from the St. Petersburg budget are the St. Petersburg Legislative Assembly of and the St. Petersburg Government represented by the Petersburg Governor's Administration, St. Petersburg districts' administrations and various committees, departments, inspections and services of St. Petersburg. The financing of the activities of the committees, departments, inspections and services of St. Petersburg is 76-78% of the total budget expenditures. The next in terms of funding are the St. Petersburg districts' administrations (23-21%). Data on the volume of expenditures by budget managers in St. Petersburg and the departmental structure of expenses are given in the appendix (*Table 3*).

The distribution of budget allocations of the St. Petersburg budget in the areas of expenditure, compiled on the basis of data from annex 3 to the Law of St. Petersburg No. 558-119, is given in the appendix (*Tables 4, 5*).

The main items of the regional budget expenditure are National Economy, Education, Social Policy, Healthcare, Housing andpublic utilities, and National Issues, which together make up more than 90% of the region's budget expenditures for a three-year period. Expenditures under the National Economy section (25% on average of the total budget allocations) of the budget under consideration are mainly formed from the costs of transport, road facilities, communications, and computer science, which account for 94-95% of the costs under the section. Expenses under the Education section (21-23% of the total budget allocations) for 75% are the costs of general, preschool, secondary vocational and additional education of children.

The largest subsections of costs in the Social Policy section are subsection 03 – Social security of the population (62.4% of all costs of the section), formed mainly by the costs of paying insurance premiums for compulsory health insurance of the unemployed population within the territorial programme of compulsory health insurance (38% of the subsection or

23.9% of the section) and for the provision of social support measures to pay for housing and utilities to certain categories of citizens (7.1% of the subsection or 11.3% of the Social Policy section), subsection 04 – Family and Childhood Protection (19-20% of all costs of the section), 30% of the costs of which fall on the costs of supporting families with children and paying monthly child allowance and subsection 02 – Social Services of the Population (15-16% of all costs of the section).

Thus, the city's budget has a social orientation.

The 2022-2024St. Petersburg budget, as follows from Table 1, is deficient by 80.7 billion rubles, which is allowed within the limits specified in part 2 of article 92.1 of the RF's BC: no more than 15% of the approved total annual revenue of the budget of the subject of the Russian Federation, excluding the approved amount of gratuitous receipts (*Budget Code of the Russian Federation No. 145-FZ, 1998*). Taking into account the data on the amount of gratuitous receipts determined in the revenue part of the budget, it can be concluded that the size of the deficit meets the requirement established in part 4 of article 92.1 (*Budget Code of the Russian Federation No. 145-FZ, 1998*). It is worth noting that the expected deficit in 2022 is 9 billion rubles. less than the planned value laid down in 2021.

The lists of sources of external and internal financing of the regional budget deficit are defined in parts 1-2 of article 95 of the RF's BC are closed. Based on the data provided in annex 4 to the Law of St. Petersburg No. 558-119, it can be concluded that only internal sources act as a source of financing the St. Petersburg budget deficit for 2022 and the planning 2023-2024, among which the main ones are St. Petersburg government bonds (87.5% in 2022 with a projected decrease to 79% in 2023 and an increase to 100% in 2024) and budget loans attracted by the St. Petersburg budget from the federal budget in rubles (12% in 2022 with a projected increase to 20.5% in 2023 and a decrease to a negative value in 2024). The specified dynamics of financing and data from annex 5 to the Law of St. Petersburg No. 558-119, demonstrate that long-term St. Petersburg government bonds with a maturity of up to 15 years are considered as the main source of financing the deficit in 2022-2024, while in 2022-2023, the deficit is planned to be partially repaid at the expense of budget loans received from the federal budget for financial support of infrastructure projects' implementation, with the beginning of their repayment in 2024 (*Table 6*).

The upper limit of the St. Petersburg state internal debt on January 1, 2023, is set at 165.34 billion rubles, with a projected increase of 42.6% to 235.91 billion rubles as on January 1, 2024, and 73.3% to 286.57 billion rubles as on January 1, 2025. The increase in public domestic debt is due to the growth of the above-mentioned borrowings due to the issuance of long-term St. Petersburg government bonds, which occupy 90-94% of domestic debt structure, and budget loans from the federal budget for the infrastructure projects' implementation (5.85% in 2022, 10.2% in 2023, 8.18% in 2024). Part 4 of article 107 of the RF's BC establishes the upper limit of the state debt of the RF's subject, equal to the total amount of budget revenues of the RF's subject approved by the law of the RF's subject on the budget of the RF's subject for the next financial year and planning period, excluding the approved amount of gratuitous receipts. As it follows from the data in Table 2 on the amount of tax and non-tax revenues, this requirement is met.

In addition to the above indicators, the Law of St. Petersburg No. 558-119 establishes the conditions for interaction with the inner-city municipalities budgets (hereinafter – ICM) of St. Petersburg (local budgets), in particular:

1) taking into account the requirements of article 93.2 of the RF's BC, a programme has been approved to provide local budgets with budget loans from the St. Petersburg budget for 2022 and for the planning period of 2023 and 2024 according to annex 6 to Law No. 558-119, with a limit of funds under the program in the amount of 222.6 million rubles, of which 200 million rubles are provided as loans to cover temporary cash gaps arising in the execution of local budgets, and 22.6 million rubles to repay the obligations of St. Petersburg ICM on loans received from credit organizations;

2) annex 7 of the Law of St. Petersburg 558-119 establishes a list of sources of revenue for the budgets of St. Petersburg ICM, in particular:

- according to paragraph 1 of part 1 of article 58 and part 2 of article 61.4 in parts 1.1-1.3 of annex 7 of the RF's BC, the standards for deductions to the local budget of personal revenue tax receipts, including an additional standard in the amount of 0.1 to 23.4% in 2022, from 1% to 21.2% in 2023, from 0.9% to 20.2% in 2024 for 13 ICMs, were approved. This standard replaces subsidies transferred to local budgets, which is reflected in annex 8 to the Law of St. Petersburg No. 558-119;

- list of non-tax revenues and gratuitous receipts to the Ministry of Defense according to part 1 of article 62, part 4 of article 61 of the RF's BC;

3) annex 8 approves subsidies for equalising the ICM budget provision, taking into account the amounts of subsidies replaced by additional standards of deductions from personal revenue tax (*Table 7*);

4) paragraph 4 and annexes 9-11 approve the amounts of subventions for the execution by local governments in St. Petersburg of certain state powers of St. Petersburg (*Table 7*).

In addition, the Law of St. Petersburg No. 558-119 approved the 2022-2024 Targeted Investment Program (article 13), the volume and structure of budget allocations of the St. Petersburg Road Fund (article 14), defined the list of funds subject to treasury support (Article 17), and also established other financial indicators: the size of the base unit accepted for calculation official salaries and tariff rates (salaries) of employees of state institutions under the jurisdiction of the executive bodies of state power of St. Petersburg (article 18), the amount of budget allocations of the reserve fund of the St. Petersburg Government (article 19) and the limit on the provision of rent benefits for non-residential facilities, the lessor of which is St. Petersburg (article 20).

Conclusion

In conclusion of the analysis of the St. Petersburg budget 2022 and the planning period 2023-2024, its financial stability using the method of V.V. Ivanov (*Ivanov & Korobova, 2002*), which uses indicators characterising budget revenues and expenditures, is assessed. Based on the results of the preparation and execution of the budget, budget analysis can be performed.

In the analysis of the budget financial stability, the following coefficients that characterise the budget potential, i.e., the potential for the accumulation of financial resources in the budget system, are used:

- coefficient of budgetary autonomy (independence),
- budget dependency ratio.
- stability coefficient,
- coefficient characterizing the level of deficit,
- business activity coefficient,
- coefficient characterizing the level of tax revenues,
- budget coverage ratio,
- the coefficient of budgetary provision of the population.

The result of the calculations and the rating score are shown in the appendix (*Tables 8, 9*). From the results obtained, it follows that the planned budget of the region is balanced and stable, low dependence on the federal budget and high dependence on tax revenues.

References:

Budget Code of the Russian Federation No. 145-FZ. (1998, July 31). Retrieved July 20, 2022, from https://normativ.kontur.ru/document?moduleId=1&documentId=436511 (in Russian)

Federal Law No. 184-FZ On the General Principles of the Organisation of Legislative (Representative) and Executive bodies of State Power of the Russian Federation's Subjects. (1999, October 6). Retrieved June 10, 2022, from https://www.consultant.ru/document/cons_doc_LAW_14058/ (in Russian)

Ivanov, V.V., & Korobova, A.N. (2002). *Municipal management*. Moscow: INFRA-M. (in Russian)

Mamiy, E.A. (2005). Analysis of the Regional Budget: Theory and Practice. *Budget Policy*, *12*(27), 47-51. (in Russian)

Nikiforov, O.N., Gorokhova, C.M., Dmitrieva, L.V., Timofeeva, S.A., Filippova, A.I., Chernykh, S.V., & Chuprina, E.V. (Eds.). (2022). A brief statistical collection. St. Petersburg: Petrostat. in Russian)

Order of the Ministry of Finance of the Russian Federation No. 85n On the Procedure for the Formation and Application of Budget Classification Codes of the Russian Federation, Their Structure and Principles of Appointment (2019, June 6). Retrieved June 15, 2022, from https://normativ.kontur.ru/document?moduleId=1&documentId=430051 (in Russian)

Resolution of the St. Petersburg Government No. 1007 On the Register of Expenditure Obligations of St. Petersburg (2005, July 12). Retrieved June, 5, 2022, from https://docs.cntd.ru/document/8413875 (in Russian)

Retail trade turnover in the Russian Federation in 2021 increased by 7.3%. (2022, February 9). TASS: Economy. Retrieved June 1, 2022, from https://tass.ru/ekonomika/13661667 (in Russian)

Statistical bulletin "Estimated Population of the Russian Federation until 2035". (2020). Moscow: Federal State Statistics Service of the Russian Federation. Retrieved June, 7, 2022, from https://rosstat.gov.ru/compendium/document/13285 (in Russian)

The Law of St. Petersburg No. 558-119 On the Budget of St. Petersburg for 2022 and for the
Planning Period of 2023 and 2024. (2021, November 25) Retrieved June 10, 2022, from
www.pravo.gov.ru (in Russian)

The results of the socio-economic development of St. Petersburg in January-December 2021.
(2022). St. Petersburg: Committee on Economic Policy and Strategic Planning of St.
Petersburg. (in Russian)

Zabralova, E.A. (2021). Expenditure obligations of the subject of the Russian Federation in the
social sphere in the budget structure. *Bulletin of the O.E. Kutafin University*, *9*, 82-88. Retrieved
June 6, 2022, from https://vestnik.msal.ru/jour/article/download/1543/1564 (in
Russian)

Appendix

Table 1. The main indicators of the budget of St. Petersburg for 2022-2024, thousand rubles

Indicator	2022	2023	2024
Total budget revenues	890,764,364.90	978,757,009.40	1,049,398,852.70
of these, gratuitous receipts	32,633,556.70	35,779,184.10	26,602,364.00
Total budget expenditures	971,505,654.40	1,049,480,346.30	1,100,538,677.10
of these, conditionally approved expenses	-	45,526,769.40	120,266,166.90
Budget deficit	80,741,289.50	70,723,336.90	51,139,824.40
the share of the deficit from the total annual revenue volume excluding gratuitous receipts	9.41%	7.50%	5.00%

Table 2. Structure of tax and non-tax revenues of the budget of St. Petersburg in 2022-2024 (compiled
on the basis of annex 1 to the Law of St. Petersburg No. 558-119)

Sources of income	Budget revenues, million rubles.			The share of items in the volume of the type of income, %			Доля статей в общей сумме доходов, %		
	2022	Planning period		2022 год	Planning period		2022 год	Planning period	
		2023	2024		2023 год	2024 год		2023 год	2024 год
TAX AND NON-TAX REVENUES	**858,130.81**	**942,977.83**	**1,022,796.49**	-	-	-	**96.34%**	**96.34%**	**97.46%**
TAX REVENUES	**813,453.69**	**891,268.97**	**970,432.63**	**100.00%**	**100.00%**	**100.00%**	**91.32%**	**91.06%**	**92.48%**
Income taxes, income (corporate income tax, personal income tax)	645,865.74	710,528.51	777,429.09	79.40%	79.72%	80.11%	72.51%	72.59%	74.08%
Property taxes (on the property of organizations, individuals, gambling, transport, land)	69,154.71	75,637.63	81,256.39	8.50%	8.49%	8.37%	7.76%	7.73%	7.74%
Taxes on total income (unified social tax, patent taxation system, simplified taxation system)	63,456.97	68,593.90	73,437.31	7.80%	7.70%	7.57%	7.12%	7.01%	7.00%
Taxes on goods, works, services sold on the territory of the Russian Federation (excise taxes)	33,065.18	34,584.64	36,363.85	4.06%	3.88%	3.75%	3.71%	3.53%	3.47%
Taxes, fees and regular payments for the use of natural resources (MET, fees for the use of wildlife and the use of water resources)	8.00	8.34	8.69	0.0010%	0.0009%	0.0009%	0.0009%	0.0009%	0.0008%
Государственная пошлина	1,903.10	1,915.95	1,937.30	0.23%	0.21%	0.20%	0.21%	0.20%	0.18%
NON-TAX REVENUES	**44,677.12**	**51,708.85**	**52,363.86**	**100.00%**	**100.00%**	**100.00%**	**5.02%**	**5.28%**	**4.99%**
Income from the use of state and municipal property	17,551.51	19,755.97	19,466.34	39.29%	38.21%	37.18%	1.97%	2.02%	1.85%
Fines, sanctions, damages	9,801.83	11,917.35	13,263.36	21.94%	23.05%	25.33%	1.10%	1.22%	1.26%
Income from the sale of tangible and intangible assets	8,775.44	7,215.87	6,391.31	19.64%	13.95%	12.21%	0.99%	0.74%	0.61%
Income from the provision of paid services and compensation of state costs	8,363.37	12,633.54	13,055.05	18.72%	24.43%	24.93%	0.94%	1.29%	1.24%
Payments for the use of natural resources	75.26	75.26	75.37	0.17%	0.15%	0.14%	0.01%	0.01%	0.01%
Administrative fees and charges	5.50	5.50	5.50	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%
Other non-tax income	104.21	105.36	106.93	0.23%	0.20%	0.20%	0.01%	0.01%	0.01%
GRATUITOUS RECEIPTS	**32,633.56**	**35,779.18**	**26,602.36**	-	-	-	**3.66%**	**3.66%**	**2.54%**
TOTAL REVENUES	**890,764.36**	**978,757.01**	**1,049,398.85**	-	-	-	**100%**	**100%**	**100%**

Table 3. St. Petersburg budget expenditures in 2022-2024 by budget managers

Sources of income	The amount of budget expenditures, thousand rubles			The share of the expenditure item in the total volume, %			The recipient's share of expenses under the article, %		
	2022 год	2023 (plan)	2024 (plan)	2022	2023 (plan)	2024 (plan)	2022	2023 (plan)	2024 (plan)
St. Petersburg districts' administrations	225,265,919.70	220,215,968.00	226,549,153.40	23.16%	20.05%	20.54%	-	-	-
St. Petersburg Governor's Administration	4,856,908.00	5,005,171.70	4,668,962.80	0.5%	0.5%	0.42%	-	-	-
St. Petersburg Legislative Assembly	1,576,592.60	1,532,119.40	1,594,968.50	0.16%	0.15%	0.14%	-	-	-
Committees, departments, inspections, services, including:	739,806,234.10	822,727,087.20	867,725,592.40	76.2%	78.4%	78.9%	100.%	100%	100%
Health Committee	123,757,140.10	121,160,993.60	122,406,347.40	12.7%	11.52%	11.13%	16.7%	14.7%	14.1%
Transport Committee	99,644,738.40	111,354,941.10	113,644,271.70	10.3%	10.62%	10.32%	13.5%	13.5%	13.1%
Committee on St. Petersburg Social Policy	83,522,617.50	85,987,198.10	90,115,875.80	8.60%	8.19%	8.19%	11.3%	10.5%	10.4%
Committee for the Development of St. Petersburg Transport Infrastructure of	68,273,112.70	98,760,720.60	89,555,145.40	7.03%	9.43%	8.15%	9.2%	12.03%	10.3%
Committee of St. Petersburg Property Relations	48,205,284.50	60,139,201.10	36,852,951.60	4.96%	5.75%	3.35%	6.5%	7.31%	4.3%
Committee of St. Petersburg Finance	44,776,124.50	73,143,740.70	152,806,640.60	4.63%	6.97%	13.9%	6.05%	8.89%	17.5%
Housing Committee	39,719,852.50	38,543,139.90	39,552,188.90	4.09%	3.67%	3.59%	5.37%	4.68%	4.6%
Construction Committee	33,896,076.60	43,500,586.30	33,040,963.40	3.49%	4.14%	3.05%	4.58%	5.29%	3.8%
Other committees, departments, inspections, services	198,011,287.30	190,136,565.80	189,751,207.60	20.4%	18.12%	17.22%	26.8%	23.1%	21.9%
Total:	**971,505,654.40**	**1,049,480,346.30**	**1,100,538,677.10**	**100%**	**100%**	**100%**	-	-	-

Table 4. Budget allocations of the St. Petersburg budget by sections of expenditures types in 2022-2024

Title	Section code	The amount of expenses, million rubles.			The share of the type of expenses in the total amount, %		
		2022	2023 (plan)	2024 (plan)	2022	2023 (plan)	2024 (plan)
National economy	04	232,555.30	282,782.74	267,750.40	23.94%	26.95%	24.33%
Education	07	220,977.69	226,698.08	225,882.93	22.75%	21.60%	20.52%
Social policy	10	158,164.74	163,150.18	170,161.76	16.28%	15.55%	15.46%
Healthcare	09	104,307.08	100,097.87	94,661.87	10.74%	9.54%	8.60%
Housing and communal services	05	86,346.07	84,589.98	83,812.65	8.89%	8.06%	7.62%
National issues	01	75,915.43	106,633.10	168,246.11	7.81%	10.16%	15.29%
Physical education and sports	11	33,726.50	19,049.35	17,441.08	3.47%	1.82%	1.58%
Culture, cinematography	08	29,392.34	32,827.45	35,092.59	3.03%	3.13%	3.19%
Inter-budgetary transfers of a general nature to the budgets of the Russian Federation budgetary system	14	8,768.50	9,039.05	9,297.41	0.90%	0.86%	0.84%
Servicing of state and municipal debt	13	7,295.91	13,380.29	18,028.39	0.75%	1.27%	1.64%
National security and law enforcement	03	6,580.18	6,582.92	5,550.72	0.68%	0.63%	0.50%
Mass media	12	4,713.81	2,373.94	2,393.38	0.49%	0.23%	0.22%
Environmental protection	06	2,609.46	2,204.63	2,153.43	0.27%	0.21%	0.20%
National defense	02	152.64	70.76	65.95	0.02%	0.01%	0.01%
Total:		**971,505.65**	**1,049,480.35**	**1,100,538.68**	**100%**	**100%**	**100%**

Note: The sections of the cost classification highlighted in blue are detailed in Table 5.

Table 5. The volume of budget allocations for the largest sections of the expenditures classification provided for by 2022-2024St. Petersburg budget.

Chapter / Subsection / Target article		The amount of expenses, million rubles			Share of expenses by subsection in the section, %		
		2022	2023 (plan)	2024 (plan)	2022	2023 (plan)	2024 (plan)
National economy – total		**232,555.30**	**282,782.74**	**267,750.40**	**100.0%**	**100.0%**	**100.0%**
including:	Transport	123,973.12	159,681.74	163,548.65	53.3%	56.5%	61.1%
	Road management (road funds)	66,036.57	79,607.49	61,817.43	28.4%	28.2%	23.1%
	Communications and computer science	28,609.90	29,997.57	30,378.45	12.3%	10.6%	11.3%
Education – total		**220,977.69**	**226,698.08**	**225,882.93**	**100.0%**	**100.0%**	**100.0%**
including:	General education	103,882.79	109,689.13	110,343.21	47.0%	48.4%	48.8%
	Preschool education	69,862.85	72,255.53	71,230.86	31.6%	31.9%	31.5%
	Secondary vocational education	17,283.30	17,142.71	17,891.89	7.8%	7.6%	7.9%
	Additional education of children	13,065.07	13,348.14	13,315.29	5.9%	5.9%	5.9%
	Youth policy	8,498.97	7,354.63	7,376.46	3.8%	3.2%	3.3%
	Higher education	43.48	45,49	47.24	0.02%	0.02%	0.02%
Social policy – total		**158,164.74**	**163,150.18**	**170,161.76**	**100.0%**	**100.0%**	**100.0%**
including:	Social security of the population	98,682.79	102,172.19	105,242.67	62.4%	62.6%	61.8%
	Protection of family and childhood	31,360.10	31,945.54	34,183.77	19.8%	19.6%	20.1%
	Social services for the population	25,805.52	25,126.37	26,074.67	16.3%	15.4%	15.3%
	Pension provision	357.90	445.07	547.56	0.2%	0.3%	0.3%
Healthcare – total		**104,307.08**	**100,097.87**	**94,661.87**	**100.0%**	**100.0%**	**100.0%**
including:	Other health issues	66,890.54	61,245.59	54,397.11	64.1%	61.2%	57.5%
	Inpatient medical care	20,730.06	21,616.76	22,337.37	19.9%	21.6%	23.6%
	Outpatient care	12,314.90	12,692.05	13,211.25	11.8%	12.7%	14.0%
	Sanatorium and wellness assistance	2,717.72	2,822.16	2,924.72	2.6%	2.8%	3.1%
	Emergency medical care	287.81	299.61	311.89	0.3%	0.3%	0.3%
Housing and communal services – total		**86,346.07**	**84,589.98**	**83,812.65**	**100.0%**	**100.0%**	**100.0%**
including:	Public utilities	39,648.03	38,639.86	38,451.64	45.9%	45.7%	45.9%
	Landscaping	25,545.38	25,027.46	24,419.48	29.6%	29.6%	29.1%
	Housing	15,816.78	15,463.72	15,279.45	18.3%	18.3%	18.2%
	Other issues in the field of housing and communal services	5,335.87	5,458.95	5,662.08	6.2%	6.5%	6.8%
National issues		**75,915.43**	**106,633.10**	**168,246.11**	**100.0%**	**100.0%**	**100.0%**
including:	Other national issues	43,689.82	97,880.90	158,619.49	57.6%	91.8%	94.3%
	Reserve funds	27,500.00	4,000.00	4,000.00	36.2%	3.8%	2.4%
	Functioning of legislative (representative) bodies of state power and representative bodies of municipalities	1,630.04	1,585.60	1,600.80	2.1%	1.5%	1.0%
	The judicial system	971.30	992.05	1,032.75	1.3%	0.9%	0.6%
	Ensuring the activities of financial, tax and customs authorities and financial (financial and budgetary) supervision bodies	967.10	1,003.92	1,045.28	1.3%	0.9%	0.6%
	Ensuring the conduct of elections and referendums	533.62	543.72	1,304.48	0.7%	0.5%	0.8%
	Functioning of the Russian Federation Government, the highest executive bodies of state power of the Russian Federation's subjects, local administrations	366.48	363.43	378.30	0.5%	0.3%	0.2%

Table 6. Sources of financing of the St. Petersburg budget deficit in 2022-2024

Name of the source	The amount of financing, thousand rubles (in percent of total funding)		
	2022	2023 (plan)	2024 (plan)
SOURCES OF INTERNAL FINANCING OF BUDGET DEFICITS	80,741,289.50 (100.0%)	70,723,336.90 (100.0%)	51,139,824.40 (100.0%)
Government bonds of St. Petersburg	70,667,697.00 (87.52%)	56,100,762.00 (79.32%)	51,347,900.00 (100.4%)
Budget loans attracted by the St. Petersburg budget from the federal budget in the Russian Federation currency	9,669,648.00 (11.98%)	14,467,075.00 (20.46%)	-690,689.10 (-1.35%)
of these: for financial support of the implementation of infrastructure projects (Annex 5 to Law No. 558-119)	9,669,648.00 (11.98%)	14,467,075.00 (20.46%)	-690,689.10 (-1.35%)
Change in other balances of St. Petersburg budget funds temporarily placed in securities	415,200.10 (0.51%)	155,499.90 (0.22%)	460,000.50 (0.9%)
Budget loans granted to other budgets of the Russian Federation budget system from the St. Petersburg budget in the Russian Federation currency	-22,613.00 (-0.03%)	0.00	22,613.00 (0.04%)
Other budget loans (loans) provided by the St. Petersburg budget within the country	11,357.40 (0.01%)	0.00	0.00

Table 7. Volume and structure of grants and subventions to local budgets in 2022-2024 according to the St. Petersburg budget.

Indicator	2022	2023 (plan)	2024 (plan)
Total amount of grants	9,528.80	9,822.85	10,098.93
	100.0%	100.0%	100.0%
of these			
the amount of subsidies replaced by additional standards of deductions from personal income tax	1,224.01	1,265.71	1,302.37
	12.85%	12.89%	12.90%
the amount of subsidies to be transferred to local budgets	8,304.78	8,557.14	8,796.56
	87.15%	87.11%	87.10%
The total amount of subventions for the execution by local self-government bodies in St. Petersburg of certain state powers of St. Petersburg	2,587.01	2,608.11	2,715.01
	100.0%	100.0%	100.0%
of these			
to exercise the authority to organise and carry out activities for guardianship and guardianship, the appointment and payment of funds for the maintenance of children under guardianship or guardianship, and funds for the maintenance of children placed in foster care (Annex 9)	1,909.19	1,902.50	1,980.47
	73.8%	72.9%	72.9%
to exercise the authority to determine the officials of local self-government authorised to draw up protocols on administrative offenses, and to draw up protocols on administrative offenses (Annex 10)	0.899	0.932	0.966
	0.03%	0.04%	0.04%
to exercise the authority to organize and carry out cleaning and sanitary cleaning of territories (Annex 11)	676.92	704.68	733.57
	26.2%	27.0%	27.0%
The total amount of subsidies to local budgets (paragraph 8 of article 12 of the Law of St. Petersburg No. 558-119)	300.00	-	-
	100.0%	-	-
of these			
for the organisation of the improvement of the territory of the municipality	100.0	-	-
	33.33%	-	-
for the implementation of works in landscaping in the municipality territory	200.0	-	-
	66.67%	-	-

Table 8. Data for assessing the level of sustainability and independence of the St. Petersburg budget for 2022 and the planning period 2023-2024 (in millions rubles)

Indicators	Years		
	2022	2023	2024
Budget expenditures	971,505.65	1,049,480.35	1,100,538.68
Budget revenues	890,764.36	978,757.01	1,049,398.85
Tax and non-tax revenues	858,130.81	942,977.83	1 022,796.49
Gratuitous receipts	32,633.56	35,779.18	26,602.36
Non-tax revenues	44,677.12	51,708.85	52,363.86
Tax revenues	813,453.69	891,268.97	970,432.63
The size of the deficit	80,741.29	70,723.34	51,139.82
Population size	5,447.90	5,469.30	5,486.70
Budgetary autonomy ratio (independence)	96.3%	96.3%	97.5%
Budget dependency ratio	3.7%	3.7%	2.5%
Stability ratio	3.8%	3.8%	2.6%
The ratio characterising deficit level	9.4%	7.5%	5.0%
The ratio characterising non-tax revenues level (business activity)	5.2%	5.5%	5.1%
The ratio characterising tax revenues level	94.8%	94.5%	94.9%
Budget coverage ratio (budget payback)	91.7%	93.3%	95.4%
The ratio of budgetary provision of the population	17,832.7%	19,188.6%	20,058.3%

Table 9. Rating assessment of the St. Petersburg budget for 2022-2024 (points)

Indicators		Standard		Years		
				2022	2023	2024
1.	Budgetary autonomy ratio (independence)	≥ 80	1	1	1	1
		≥ 70	0			
		≤ 70	-1			
		≤ 40	-2			
2.	Budget dependency ratio	≤ 20	1	1	1	1
		≤ 30	0			
		≥ 40	-1			
		≥ 60	-2			
3.	Stability coefficient	≤ 0,3	1	1	1	1
		0,3 - 0,6	0			
		0,6 - 1	-1			
		≥ 1	-2			
4.	The ratio characterising deficit level	-	2	1	1	1
		≤ 10	1			
		15	-1			
		≥ 15	-2			
5.	Business activity ratio	≥ 20	2	-1	-1	-1
		-10	1			
		≤ 10	-1			
6.	The ratio characterising tax revenues level	60-80	1	-1	-1	-1
		≥ 80	-1			
7.	Budget coverage ratio	≥ 1	2	1	1	2
		1-0,95	1			
		≤ 0,95	-1			
8.	Population budgetary provision ratio	The growth rate of the ratio should outpace the growth rate of inflation		1	1	1
	Final rating			4	4	5

Figure 1. The structure of 2022-2024 St. Petersburg budget revenues

Figure 1. The structure of 2022-2024 St. Petersburg budget revenues
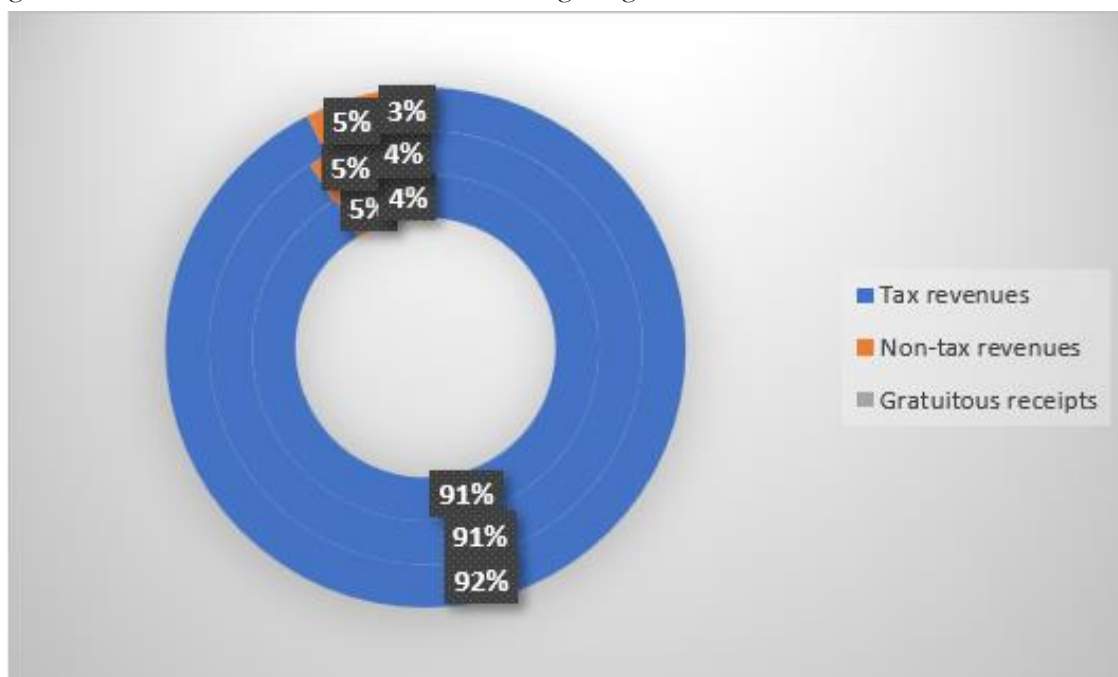
Figure 2. The structure of 2022 St. Petersburg tax revenues budget
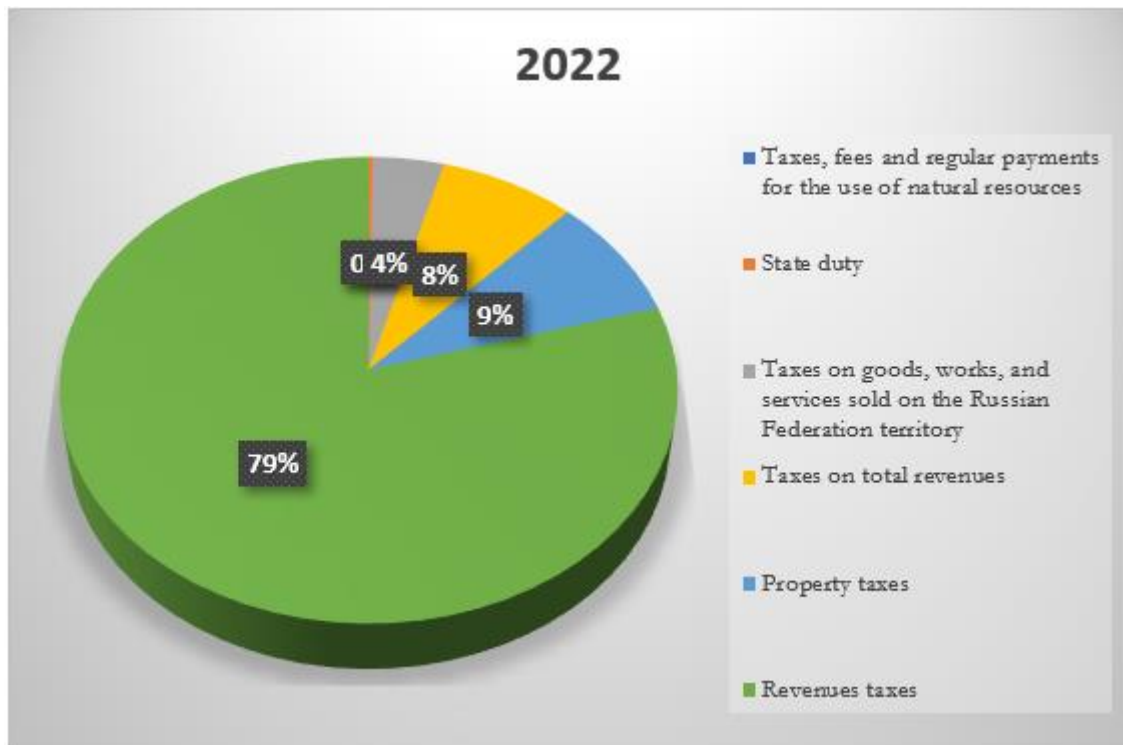
Figure 3. The structure of 2023 St. Petersburg tax revenues budget

Figure 4. The structure of 2024 St. Petersburg tax revenue budget
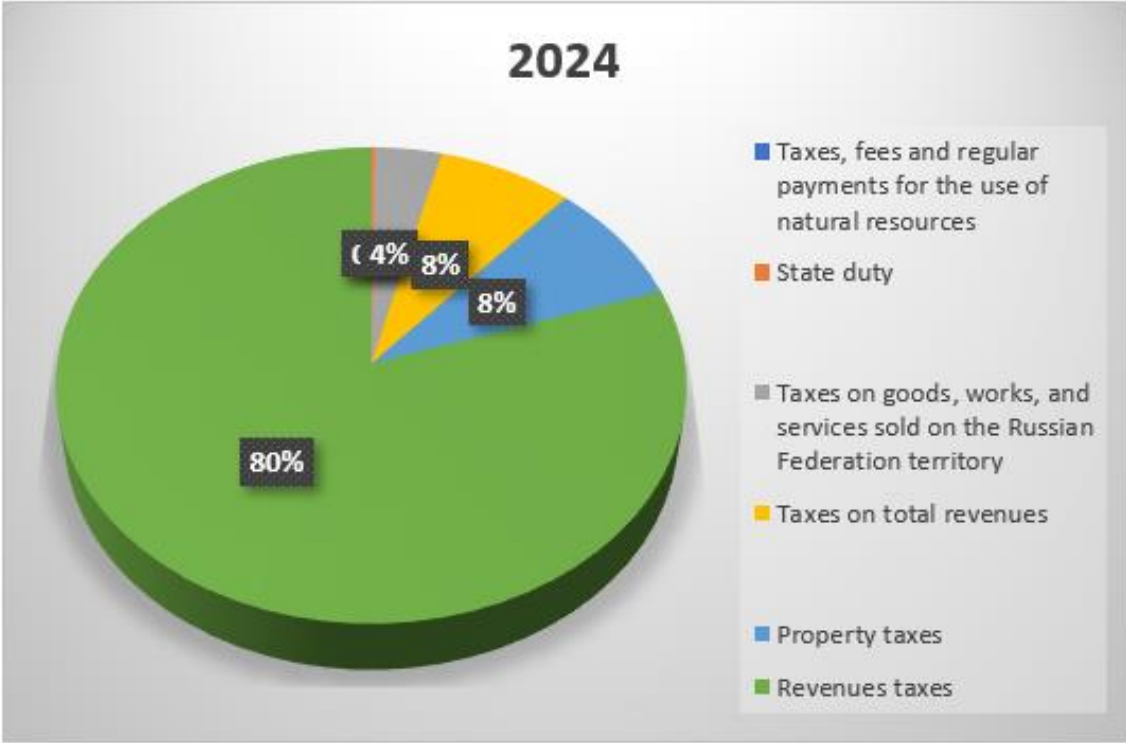
Figure 5. The structure of 2022 St. Petersburg non-tax revenues budget
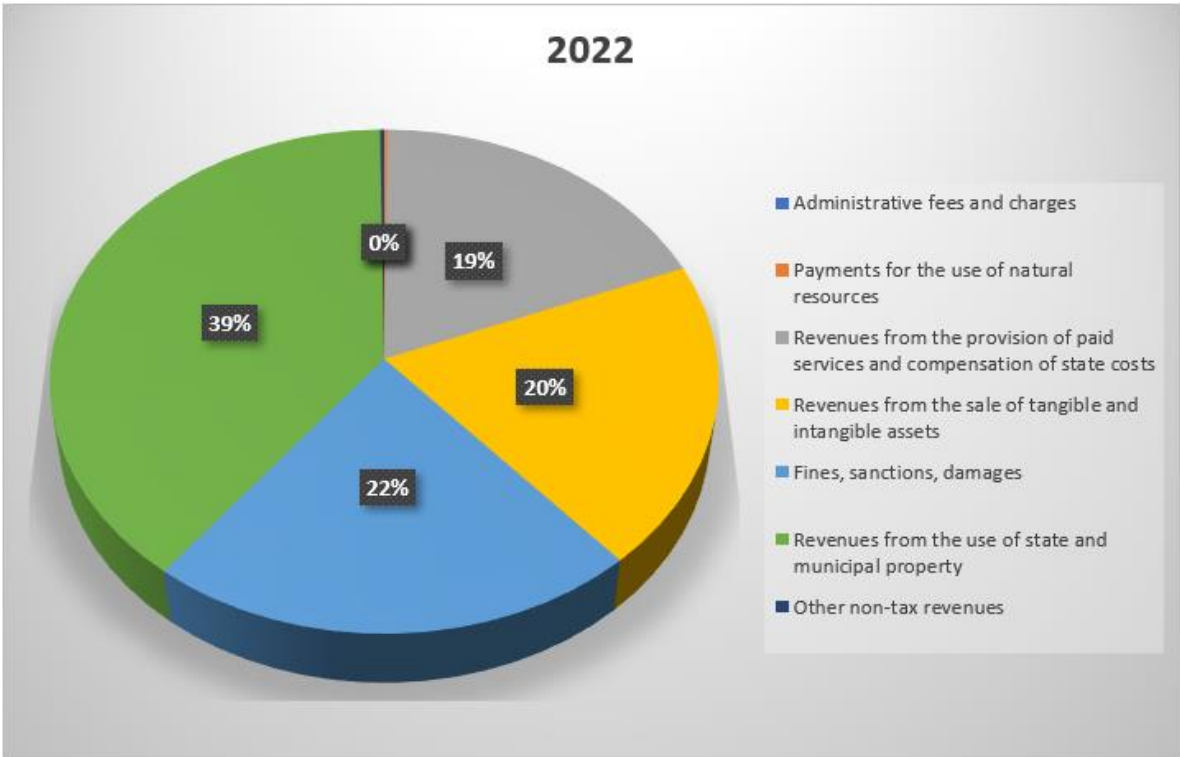
Figure 6. The structure of 2023 St. Petersburg non-tax revenues budget
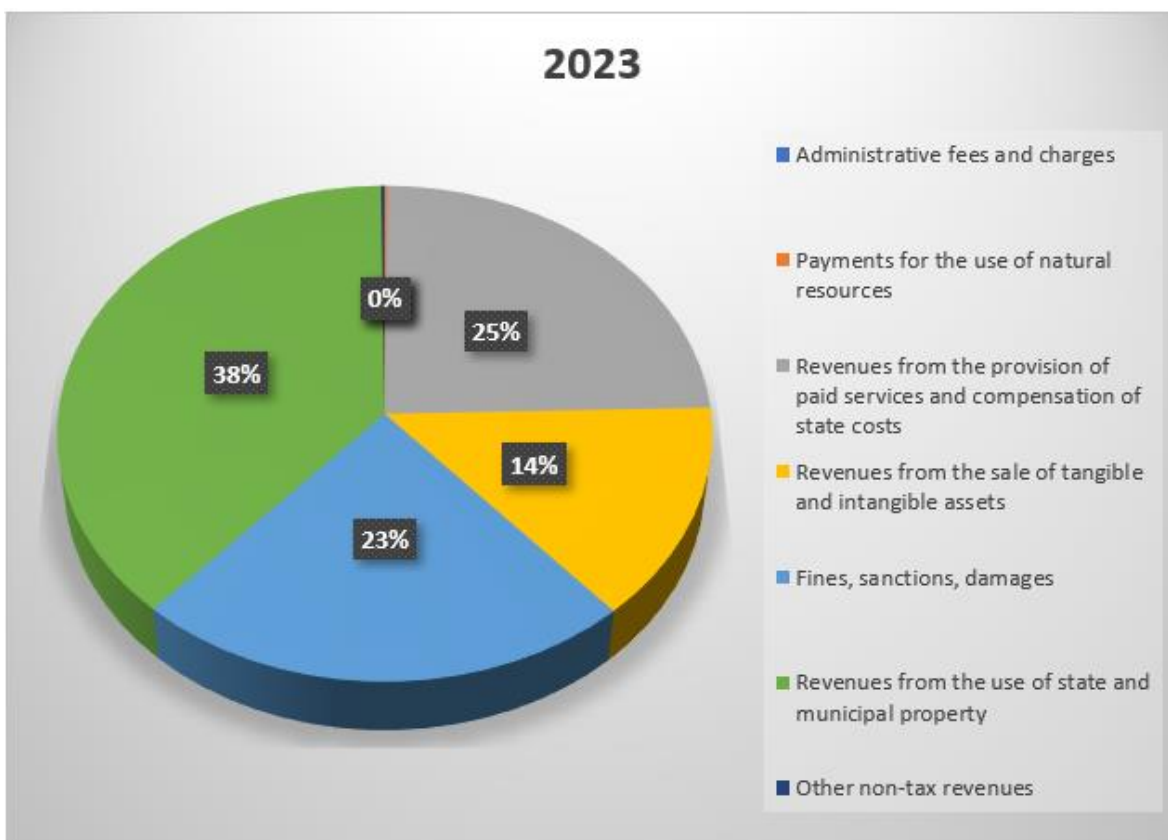
Figure 7. The structure of of the 2024 St. Petersburg non-tax revenues budget
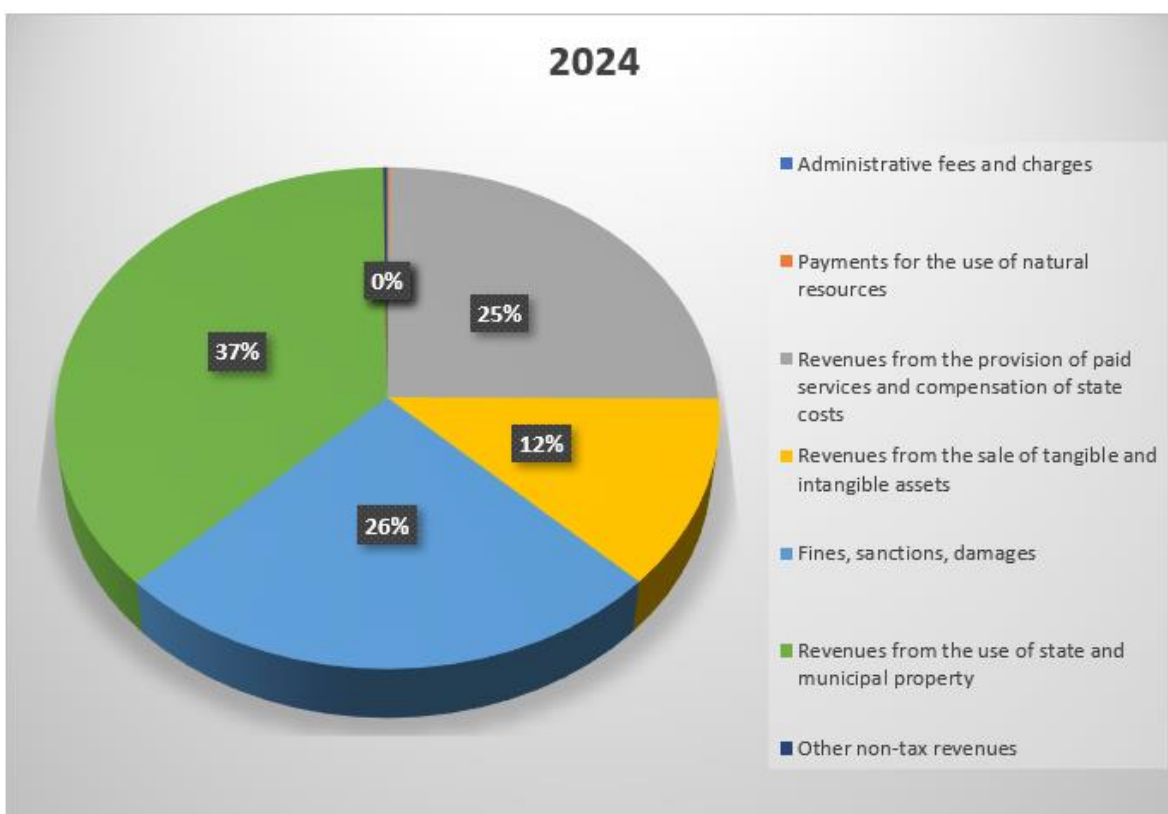
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The transition to performance management in Eastern European countries (in Romanian)

Abstract: The purpose of this paper is to reflect on how to apply the research process for the elaboration of a theoretical explanation in studies on performance management and management control systems. This is important because ambitious theoretical research tends to require explanatory study results, but previous research frameworks provide little guidance on this, potentially facilitating poorly defined research projects and a lack of common vocabulary and criteria for study evaluation. The methodology was undertaken by an examination of the literature to review empirical studies dealing with PM in ex-communist countries in the EEC. Its illustrated framework and application make the systematic logic of the research process visible and accessible to researchers. The authors explain how the framework supports the shift from empirical description to theoretical explanation during the research process and where the three levels could open up spaces for positioning new practices and conceptual and theoretical innovations. The framework provides guidance for a research explanatory design and a theory-building purpose, and has been developed in response to recent industry criticisms that highlight the large gap between cutting-edge practice and the delayed state of theory. It offers interdisciplinary vocabulary and evaluation criteria that can be applied by any researcher in accounting and management, whether it pursues critical, interpretive or positivist research and whether it primarily uses qualitative or quantitative research methods.

Keywords: management, cost calculation, new public management.

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Tranziţia către un management performant în ţările din estul Europei

Abstract: Scopul acestei lucrări este de a reflecta asupra modului de aplicare a procesului de cercetare pentru elaborarea unei explicaţii teoretice în studiile privind managementul performanţei şi sistemele de control al managementului. Acest lucru este important deoarece cercetarea teoretic ambiţioasă tinde să necesite rezultate explicative ale studiilor, dar cadrele de cercetare anterioare oferă puţine îndrumări în acest sens, facilitând potenţial proiecte de cercetare prost definite şi o lipsă de vocabular şi criterii comune pentru evaluarea studiilor. Metodologie a fost întreprinsă de o examinare a literaturii de specialitate pentru a revizui studiile empirice care tratează PM în ţările ex-comuniste din CEE. Cadrul şi aplicarea sa ilustrată fac logica sistematică a procesului de cercetare vizibilă şi accesibilă cercetătorilor. Autorii explică modul în care cadrul sprijină trecerea de la descrierea empirică la explicaţia teoretică în timpul procesului de cercetare şi unde cele trei niveluri ar putea deschide spaţii pentru poziţionarea unor practici noi şi inovaţii conceptuale şi teoretice. Cadrul oferă îndrumări pentru un design explicativ de cercetare şi un scop de construire a teoriei şi a fost dezvoltat ca răspuns la criticile recente din domeniu care evidenţiază decalajul mare dintre practica de vârf şi starea întârziată a teoriei. Oferă vocabular interdisciplinar şi criterii de evaluare care pot fi aplicate de orice cercetător în contabilitate şi management, indiferent dacă urmăreşte cercetări critice, interpretative sau pozitiviste şi dacă utilizează în primul rând metode de cercetare calitativă sau cantitativă.

Cuvinte cheie: management, calculație a costurilor, noul management public.

Introducere

Sistemele de control sau sistemele de control al managementului au fost descrise și caracterizate încă din anii 1960, spunând că aceste sisteme oferă o structură, care rezultă în datele de control și un proces de utilizare a datelor (*Anthony, 1965*).

În ultimii treizeci de ani, reformele new public management (NPM) au schimbat drastic rolul și modul în care sunt gestionate instituțiile din sectorul public (*Hood, 1991*). Aceste reforme au avut ca scop abordarea deficiențelor paradigmei tradiționale a administrației publice, bazată pe modelul lui Weber de birocrație ideală (*Hood, 1991*).

Pentru a face acest lucru, guvernele din vest au introdus concepte și instrumente derivate din sectorul privat , de exemplu, dezagregarea administrațiilor în unități corporatizate în jurul produselor / serviciilor, concurența, corelarea alocării resurselor cu performanța măsurată și responsabilitățile manageriale în cadrul organizațiilor (*Nuti, 2021*).

Tranziția managementului către un management performant

Totuși reala întrebare nu doar în sectorul privat cât și în cel public în ceea ce privește sistemul control este cum se poate face ca acesta să fie cât mai eficient, mai performat și să consume cât mai puține resurse și energie din partea managementului. Una din rezolvările acestei probleme constă în adaptabilitatea administratorilor publici cât și o flexibilitate extraordinară în ceea ce privește problemele organizaționale.

A lucra cu astfel de probleme, a accepta fluxul și refluxul lor, a gestiona schimbarea și a extrage o nouă lecție este de fapt esența învățării și a conexiunii personale dintre teorie și practică (*Oboroceanu, 2021*).

Instaurarea regimului comunist în România din 1947 și până în 1989 la căderea acestuia în urma revoluției, a lăsat răni adânci și rezistența la schimbare fiind foarte mare ducând la o tranziție dificilă către un sistem democratic în cadrul instituțiilor publice având urmări în multe instituții și 20-25 ani.

În urmă cu șase ani România încă se afla pe lista țărilor non-sovietice CEE în tranziție către un management al performanței.

Studiile exploratorii reprezintă o bază foarte importantă în ceea ce privește tranziția către managementul performanței, astfel că în cadrul mai multor studii apare un semn de întrebare cu privire la existența și utilizarea tehnicilor PM (*Percevic, 2006*; *Ramljak și Rogosic, 2012*; *Renko și Pecotich, 2001*; *Albu și Albu, 2007*; *Albu și colab., 2011*; *Almaryani și Sadik, 2012*; *Cardos și Pete, 2011*; *Grosanu și Rachisan, 2009*; *Grosu și colab., 2014*; *Jinga și Dumitru, 2014*; *Racolta-Paina și colab., 2013*; *Llaci și colab., 2002*).

Utilizarea instrumentelor de performant management (PM) contemporane rămâne destul de limitată în țările în tranziție din CEE. Studiile de caz efectuate în instituțiile financiare croate de Renko & Pecotich, 2001 arată că, chiar dacă toate băncile analizate erau familiarizate cu conceptul Balanced Scorecard, niciuna dintre ele nu a începuse implementarea sa oficială.

Percevic prin sondajul efectuat a constatat că metodele tradiţionale de calcul al costurilor sunt tipice pentru sectorul de producţie croat, caracterizat printr-un nivel scăzut de automatizare a producţiei (Percevic, 2006). Un sondaj mai recent observă schimbări încurajatoare în practicile contabile de gestiune în marile companii croate (Ramljak şi Rogosic, 2012). În contextul crizei financiare, multe companii au implementat metode sofisticate pentru a-şi controla şi reduce costurile, cele mai adoptate fiind ABC, quality costing şi target costing. Se pare că contabilitatea de gestiune strategică îşi îndeplineşte scopul de a furniza informaţii relevante şi în timp util conducerii. În plus, se observă un efect sinergic al utilizării simultane a diferitelor tehnici de contabilitate de gestiune strategică, cu impact pozitiv asupra controlului şi reducerii costurilor. Utilizarea tehnicilor complementare, fiecare dintre ele acoperind diferite segmente de strategie, creează o imagine mai clară a afacerii şi îmbunătăţeşte procesul decizional (Paladi, 2016).

În România, atât cercetarea cât şi practica PM sunt într-un stadiu incipient de dezvoltare, primele studii au apărut abia în ultimul deceniu. În primul rând, Albu şi Albu încearcă să îşi facă o idee despre utilizarea instrumentelor de contabilitate de gestiune şi să determine posibile direcţii pentru cercetările viitoare (Albu şi Albu, 2007). Analizând ofertele de locuri de muncă, ei au constatat că tehnicile cele mai utilizate au fost calculele costurilor, bugetele, analiza de risc şi indicatorii de performanţă şi sunt utilizate în principal de filialele management control systems in Multinational Corporations (MNC). Chiar dacă unele oferte indicau o relaţie între PM şi strategie, predomina o puternică componentă operaţională.

Apoi, Albu, Albu şi Guineea au realizat un studiu explicativ, cu scopul de a înţelege mai bine procesul de fabricare (în termeni laturieni) a sistemului de contabilitate de gestiune (Albu şi colab., 2011). Studiul lor de caz reprezintă o mărturie despre schimbarea contabilităţii de gestiune, afirmând rolul sistemelor informale şi al persoanelor implicate în procesul de „fabricare" în eşecul unui sistem de contabilitate de gestiune iniţial bine conceput şi susţinut în general. Interesele diferiţilor actori nu s-au întâlnit şi, în cele din urmă, au provocat schimbări în scopul iniţial al sistemului, care a servit ulterior doar pentru manipularea profitului.

Cardos şi Pete sugerează că companiile româneşti înţeleg importanţa şi utilitatea practicilor contabile manageriale şi încearcă să-şi dezvolte propriile metode, instrumente şi tehnici adaptate activităţii lor specifice (Cardos şi Pete, 2011). Cu toate acestea, companiile analizate au aplicat în mare parte instrumente tradiţionale, ignorând metodele contemporane. Mai mult, contabilitatea managerială este strâns legată de contabilitatea costurilor, companiile fiind foarte preocupate de calcularea şi managementul costurilor, bugetarea şi îmbunătăţirea proceselor interne de producţie/afacere. Ulterior, ei nu acordă suficientă atenţie nevoilor clienţilor, condiţiilor pieţei şi concurenţei intense. Sondajul lui Almaryani şi Sadik confirmă că, deşi tehnicile contemporane de PM (analiza lanţului valoric, ABC, îmbunătăţire continuă, Balanced Scorecard) sunt percepute ca având potenţialul de a juca un rol fundamental în atingerea obiectivelor strategice, ele nu sunt răspândite (Almaryani şi Sadik, 2012). Companiile recunosc că aplicarea unor astfel de metode ar putea avea beneficii importante, cum ar fi un sprijin mai bun pentru luarea deciziilor, controlul asupra costurilor de producţie, elaborarea de planuri pentru viitor şi sprijinul pentru evaluarea performanţei companiei şi a angajaţilor. Implementarea lor este însă constrânsă de un cost de utilizare mai mare în comparaţie cu metodele tradiţionale, cunoştinţe insuficiente despre utilizarea lor, reticenţa managerilor de a schimba sistemele existente care sunt considerate suficiente, deficit de personal calificat şi de baze de date adecvate pentru aplicarea acestora.

În ciuda progreselor înregistrate în direcția recunoașterii rolului important al informațiilor oferite de contabilitatea de gestiune în procesul decizional, nu multe companii aplică tehnici moderne. Sondajul lui Grosanu si Rachisan arata ca, in general, companiile considera centrele de responsabilitate ca un factor de crestere a eficientei economice, insa doar o treime dintre acestea au implementat un astfel de sistem (*Grosanu și Rachisan, 2009*). Cu toate acestea, sondajul nu a oferit o definiție clară a centrelor de responsabilitate, astfel încât rezultatele ar putea să nu fie relevante.

Studii recente prezintă opinii diferite cu privire la dezvoltarea și starea PM în România. Unele sondaje atestă o răspândire tot mai mare a cunoștințelor și utilizării tehnicilor PM (*Jinga și Dumitru, 2014*; *RacoltaPaina și colab., 2013*), în timp ce altele relevă multe deficiențe (*Grosu și colab., 2014*). Aceste contradicții sugerează necesitatea unor cercetări suplimentare.

Un sondaj la scară largă realizat de Racolta-Paina și colab. indică faptul că majoritatea angajaților din diferite companii sunt familiarizați cu principalele concepte de PM, dar doar o mică parte dintre aceștia operează cu măsuri PM (*Racolta-Paina și colab., 2013*). PM este perceput ca un mecanism de control pentru atingerea obiectivelor, dar și asociat cu un proces de învățare și perfecționare bazat pe feedback, având rolul de a monitoriza, măsura și îmbunătăți performanța. Majoritatea companiilor care adoptă PM nu folosesc sisteme binecunoscute. Doar o treime dintre ei folosesc scorecards (Balanced Scorecard, tablouri de bord), alte sisteme mai puțin menționate fiind Lean Six Sigma, Predictive Evaluation, management by objectives, TQM. Nivelul implementarii ERP este foarte scazut (mai putin de 15% din companii), solutiile IT predominante folosite de companii fiind simple si eficiente din punct de vedere al costurilor (in principal pachet Microsoft Office).

Potrivit lui Jinga și Dumitru (*Jinga și Dumitru, 2014*), se pare că în ultimii ani companiile românești fac progrese în utilizarea tehnicilor moderne de contabilitate de gestiune. Sondajul lor sugerează că multe companii utilizează deja un sistem de monitorizare a costurilor și aplică informațiile contabile de gestiune în procesul decizional. Chiar și noi instrumente de contabilitate de management încep să fie implementate, inclusiv ABC, costul direct și costul țintă. Companiile consideră că informațiile contabile de gestiune ajută la monitorizarea și reducerea costurilor, optimizarea activității și stabilirea prețurilor de vânzare. Majoritatea procedurilor de colectare, prelucrare și prezentare a informațiilor contabile au fost dezvoltate intern, ceea ce demonstrează maturitatea acestor companii.

În contrast, Grosu și colab. consideră că contabilii au neglijat problemele de contabilitate de gestiune, fiind concentrați pe raportarea financiară și conformarea fiscală (caracteristică perioadei comuniste) (*Grosu și colab., 2014*). Această lipsă de implicare a contabililor ar putea fi explicată prin interesul scăzut al managerilor pentru acest domeniu, dar și mentalitatea tayloriană a contabililor și timpul considerabil necesar procesării datelor și întocmirii rapoartelor financiare și fiscale. În consecință, nu alocă mult timp analizei și monitorizării costurilor, aceste activități fiind importante doar în companiile multinaționale. Studiul mai relevă că companiile se concentrează pe obținerea de rezultate pe termen scurt, rolul contabilității de gestiune fiind în principal de a oferi explicarea rezultatelor și analiza profitabilității produselor/serviciilor. Dimensiunea strategică este adesea ignorată, amenințând astfel adaptabilitatea și supraviețuirea companiei. Companiile folosesc în principal metode tradiționale de calcul al costurilor, iar luarea

deciziilor se bazează în general pe măsuri monetare. În consecinţă, potenţialul informativ al contabilităţii de gestiune rămâne neexploatat.

În general, orientarea pe termen scurt a managementului companiilor este comună pentru ţările în tranziţie. Rezultate similare se găsesc în Albania, unde managerii se bazează în principal pe bugetul anual şi pe planurile de dezvoltare (*Llaci şi colab., 2002*).

În plus, implementarea PMS contemporane se confruntă cu diverse provocări din cauza mediului de afaceri şi cultural specific al ţărilor în tranziţie. Printr-un studiu de caz, Sinkovic, Currie şi Bevanda prezintă câteva bariere în calea utilizării Balanced Scorecard: stil de management autocratic, management deficitar al resurselor umane, lipsă de planificare strategică, lipsă de interes pentru nevoile consumatorilor şi bariere culturale (birocraţie foarte politizată, corupţie, lipsă de voinţă politică) (*Sinkovic şi colab., 2011*).

În ceea ce priveşte factorii care influenţează adoptarea şi utilizarea tehnicilor de contabilitate de gestiune în companiile româneşti, se pare că adoptarea instrumentelor de contabilitate de gestiune este asociată în mare parte cu prezenţa capitalului străin şi cu dimensiunea unei companii mai mari (*Albu şi Albu, 2012*), în timp ce impactul mediului şi al concurenţei nu este semnificativ.

Cercetătorii sunt, de asemenea, preocupaţi de rolul contabililor şi al informaţiilor contabile în procesul de luare a deciziilor şi de utilitatea percepută a acestuia (*Albu şi colab., 2008*; *Albu şi colab., 2011*; *Briciu şi colab., 2013a*; *Briciu şi colab., 2013b*).

În România, tranziţia schimbă rolul contabilităţii de la un simplu instrument folosit pentru a răspunde nevoilor instituţiilor centrale din economia planificată la un veritabil instrument de luare a deciziilor. De asemenea, contabilul se transformă din ce în ce mai mult într-un analist de afaceri. Albu şi colab. observă o trecere la un tip hibrid de contabili, asigurând diverse sarcini legate de domeniile de contabilitate de gestiune, raportare, bilanţ consolidat şi management al stocurilor (*Albu şi colab., 2008*). Principalii factori pentru aceste schimbări sunt armonizarea legislaţiei contabile cu directivele europene, introducerea Standardelor Internaţionale de Raportare Financiară (IFRS) şi implementarea sistemelor Enterprise Resource Planning (ERP) în cadrul organizaţiilor (*Albu şi colab., 2011*).

Analizând utilitatea informaţiilor contabile pentru managerii companiilor româneşti, Briciu, Scorte şi colab. (*Briciu şi colab., 2013a*) şi Briciu, Topor şi colab. (*Briciu şi colab., 2013b*) observă că informaţiile furnizate de contabilitatea de gestiune sunt considerate mai relevante pentru luarea deciziilor ca datele de contabilitate financiară. Cu toate acestea, lipsa unui sistem de stabilire a costurilor şi subiectivitatea contabililor influenţează calitatea informaţiilor contabile de gestiune. Un alt studiu al lui Briciu, Topor şi colab. (*Briciu şi colab., 2013b*) încearcă să identifice ce metode de măsurare a performanţei sunt percepute ca fiind adecvate pentru companiile din sectorul vitivinicol românesc. Astfel, companiile pledează pentru implementarea ABC şi Balanced Scorecard, considerând că va reduce costurile şi va îmbunătăţi treptat performanţa financiară.

O altă categorie de studii este reprezentată de cercetare-acţiune care vizează îmbunătăţirea PMS existentă în companiile care operează în România (*Pintea, 2011*; *Pintea, 2012*; *Rof, 2012*; *Topor, 2013*; *Topor şi colab., 2011*).

Pintea se concentrează pe construirea unui set de indicatori pentru a evalua performanţa generală, încorporând cele trei dimensiuni: financiară, socială şi de mediu (*Pintea, 2011*; *Pintea, 2012*). De asemenea, teza de doctorat a lui Pintea (2011) propune un model de diagnostic al

performanţei generale (*Pintea, 2011*). Topor şi colab. au construit un model de contabilitate de gestiune care asigură urmărirea zilnică a veniturilor şi principalelor costuri rezultate din activităţile de exploatare din industria minieră (*Topor şi colab., 2011*). Studiul de doctorat al Topor dezvoltă modele adecvate de sisteme ABC şi Balanced Scorecard pentru sectorul vitivinicol din România (*Topor, 2013*). Rof elaborează un tablou de bord care reflectă nevoile specifice industriei energetice şi un model econometric dinamic care facilitează testarea diferitelor scenarii şi evoluţia costurilor (*Rof, 2012*).

În Muntenegru, studiul de caz al lui Kuljak examinează schimbările instituţionale şi implicaţiile acestora pentru discontinuitatea metodologică a măsurării performanţei corporative, evidenţiind rolul predominant al instituţiilor informale (*Kuljak, 2012*).

Un studiu al PM în CMN care operează în România şi Bulgaria arată că CMN-urile sunt conştiente de necesitatea localizării culturale a PMS lor şi că strategia de integrare globală şi dimensiunile culturale specifice (distanţa puterii şi masculinitatea) sunt mai importante în deciziile de personalizare decât un compozit general măsura distanţei culturale (*Claus şi Hand, 2009*).

Impactul ERP (SAP) asupra practicilor PM este examinat de Malinicand Todorovic (*Todorovic, 2012*). În ciuda aşteptărilor mari legate de utilizarea SAP, se pare că în primii ani de la implementarea acestuia efectele sunt destul de limitate. Adoptarea sa stimulează totuşi utilizarea tehnicilor moderne de PM, cum ar fi ABC şi costul ţintă. În acelaşi timp, utilizarea SAP reduce timpul necesar pentru sarcinile contabile de gestiune de rutină, dar creşte timpul pentru analiza datelor, măsurarea performanţei şi o raportare strategică mai subtilă. De asemenea, rolul contabililor de gestiune evoluează, transformându-i mai mult în analişti şi consultanţi interni, aşa cum au remarcat mai devreme Albu şi colab. (*Albu şi colab., 2008*).

Concluzii

Numărul crescut de publicaţii din ultimii ani în direcţia performanţei managementului, arată interesul crescut pentru acest domeniu devenind o preocupare importantă atât pentru cadre universitare, cât şi pentru practicieni, în căutarea adaptării la noul mediu dinamic şi a creşterii competitivităţii companiilor. Schimbarea vechilor practici şi atitudini de management al afacerilor şi adoptarea de noi tehnici, adecvate sistemelor economice de piaţă, sunt provocări importante în timpul tranziţiei.

În ţările post-tranziţie din Europa Centrală şi de Est, cercetarea PM urmează tendinţele stabilite în ţările dezvoltate şi constatările dovedesc modernizarea practicilor PM, deşi există încă loc de îmbunătăţire.

Dimpotrivă, în ţările în tranziţie, cercetarea PM reflectă particularităţile acestui proces. Literatura revizuită a relevat câteva aspecte specifice legate de contextul tranziţiei: aspectul dinamic al PM, managementul schimbării, importanţa sistemelor informale, aspectele culturale şi tradiţiile de afaceri. Cu toate acestea, potenţialul ştiinţific al cercetării în PM în context de tranziţie este încă neexploatat, cercetarea fiind într-un stadiu incipient. În consecinţă, există multe oportunităţi de cercetare ulterioară asupra PM în economiile în tranziţie.

Bibliografie

Albu, C.N., & Albu, N. (2007). Le controle de gestion en Roumanie un essai d'identification des pratiques et propositions de recherche. *Comptabilite et Environnement*. France. (în franceză)

Albu, C.N., & Albu, N. (2012). Factors associated with the adoption and use of management accounting techniques in developing countries: The case of Romania. *Journal of International Financial Management & Accounting*, *23*(3), 245-276. (în engleză)

Albu, C.N., Albu, N., Faff, R., & Hodgson, A. (2008). The changing role of accountants in a transition economy Evidence from Romania. *Annales Universitatis Apulensis Series Oeconomica*, *1*(10), 82-99. (în engleză)

Albu, C. N., Albu, N., Faff, R., & Hodgson, A. (2011). Accounting competencies and the changing role of accountants in emerging economies: The case of Romania. *Accounting in Europe*, *8*(2), 155-184. (în engleză)

Albu, C. N., Albu, N., & Guinea, F. A. (2011). The fabrication of management accounting systems Why, how and what are the consequences? A Romanian testimony. *The 6th Conference on Performance Measurement and Management Control*. Nice, France. (în engleză)

Almaryani, M.A.H., & Sadik, H.H. (2012). Strategic management accounting techniques in Romanian companies: Some survey evidence. *Procedia Economics and Finance*, *3*, 387-396. (în engleză)

Anthony, R.N. (1965). Management accounting principles. Home-wood, Ill.: R.D. Irwin. (în engleză)

Briciu, S., Scorte, C., și Mester, I. (2013). Impactul informației contabile asupra deciziilor managerialeStudiu empiric realizat la entitățile din industria ospitalității din Romania. *Economie Teoretica și Aplicata*, *XX*(9(586)), 25-37.

Briciu, S., Topor, D.I., & Capusneanu, S. (2013). Integrated methods for performance measurement in entities from the wine sector in Romania. *Annales Universitatis Apulensis Series Oeconomica*, *2*(15), 367-383. (în engleză)

Cardos, I. R., & Pete, S. (2011). Managerial and cost accounting practices A Romanian overview. Analele Universității Din Oradea. *Stiinte Economice* [The Annals of the University of Oradea. Economic Sciences], *20*(2), 484-490. (în engleză)

Claus, L., & Hand, M.L. (2009). Customization decisions regarding performance management systems of multinational companies an empirical view of Eastern European firms. *International Journal of Cross Cultural Management*, *9*(2), 237-258. (în engleză)

Gimzauskiene, E., & Valanciene, L. (2010). *Performance measurement system in the context of economics changes*. In: E. Gimzauskiene & L. Valanciene (Eds.). Economics and management [Ekonomika Ir Vadyba] (Vol. 14, 2009 ed., pp. 33-42). (în engleză)

Grosanu, A., & Rachisan, P.R. (2009). Study regarding the organization of management accounting in the context of responsibility centers. *Analele Universității Din Oradea. Stiinte Economice* [The Annals of the University of Oradea. Economic Sciences], *18*(3), 966-985. (în engleză)

Grosu, C., Almasan, A., & Circa, C. (2014). The current status of management accounting in Romania: the accountants' perception. *Proceedings of the 9th International Conference Accounting And Management Information Systems AMIS 2014*, 15-32. Bucharest, Romania. (în engleză)

Haldma, T., & Laats, K. (2002). Contingencies influencing the management accounting practices of Estonian manufacturing companies. *Management Accounting Research*, *13*(4), 379-400. (în engleză)

Haldma, T., Peda, P., & Liik, M. (2007). *Drivers of performance measurement and management systems in Estonian companies*. In T. Haldma, P. Peda, & M. Liik (Eds.). Economics and management [Ekonomika Ir Vadyba] (Vol. 12, 2007 ed., pp. 38-45).

Hood, C.A. (1991). Public Management for all seasons? *Public Adm.*, *69*, 3-20. (în engleză)

Jinga, G., & Dumitru, M. (2014). The change in management accounting. An institutional perspective for Romania. *SEA Practical Application of Science*, *II*, *2*(4), 587-594. (în engleză)

Kloviene, L. (2013). Improvement of performance measurement system according to business environment. *Economics and Management*, *18*(1), 17-25. (în engleză)

Laats, K. (2011). *Management accounting change in a dynamic economic environment based on examples from business and public sector organizations. Thesis*. Tartu, Estonia. (în engleză)

Laats, K., & Haldma, T. (2012). Changes in the scope of management accounting systems in the dynamic economic context. *Economics and Management*, *17*(2), 441-447. (în engleză)

Llaci, S., Kume, V., & Leskaj, B. (2002). Business and management in Albania. *Journal for East European Management Studies*, *7*(4), 416-427. (în engleză)

Malinic, S., & Todorovic, M. (2012). How does management accounting change under the influence of ERP? *Economic Research*, *25*(3), 722-751. (în engleză)

Nuti, S., Noto, G., Grillo Ruggieri, T., & Vainieri M. (2021). The Challenges of Hospitals' Planning & Control Systems: The Path toward Public Value Management. *International Journal of Environmental Research and Public Health*, *5*(18), 27-32. Retrieved August 15, 2022, from https://www.mdpi.com/1660-4601/18/5/2732 (în engleză)

Oboroceanu, Pavel (2021). The practice of evaluating the performance of public service management in domestic context. *International Doctoral Scientific Symposium "Modern Tendencies of Scientific Development: Vision of Young Scientists"*. MTSD. (în engleză)

Parl, U. (2006). *Choice of measures for performance measurement models on the example of successful Estonian companies* (pp. 228-247). Estonia: Faculty of Economics and Business Administration, University of Tartu. (în engleză)

Parl, U. (2012). *Understanding the role of communication in the management accounting and control process. Thesis*. University of Tampere, Finland. (în engleză)

Percevic, H. (2006). The methods of cost accounting in the Croatian production sector [Metode Obracuna Troskova U Proizvodnom Sektoru Republike Hrvatske]. *Ekonomski pregled*, *57*(910), 647-667. (în engleză)

Pintea, M.-O. (2011). *Financial and non-financial approaches regarding the growth of the economic entities' performances. Thesis*. Babes Bolyai University, Cluj Napoca, Romania. (în engleză)

Pintea, M.-O. (2012). Empirical research on the structure of a system for assessment of the global performance of economic entities. *Annals of the University of Oradea. Economic Science Series*, *1*(1), 745-752. (în engleză)

Racolta-Paina, N.-D., Mone, S.-D., și Brudan, A. (2013). Stadiul managementului performantei in Romania o cercetare exploratorie. [The state of performance management in Romania An exploratory research]. *Revista de Management și Inginerie Economică*, *12*(1), 85-100.

Ramljak, B., & Rogosic, A. (2012). Strategic management accounting practices in Croatia. *The Journal of International Management Studies*, *7*(2), 93-100. (în engleză)

Renko, F., & Pecotich, A. (2001). The balanced scorecard as a possible key for improvement of business strategy: An empirical case from Croatian banking industry. *Enterprise in transition: International Conference Proceedings*, 871-884. Ekonomski fakultet Sveucilista u Splitu. (în engleză)

Rof, L.M. (2012). *Perfecţionarea contabilităţii manageriale în sectorul energetic prin implementarea metodei ABC (Activity-Based Costing)*. Thesis. Universitatea "1 Decembrie 1918". Alba Iulia, Romania.

Sinkovic, G., Currie, D., & Bevanda, V. (2011). From it to BSC: The importance of culture in implementing a performance measurement system in Croatia. *Indian Journal of Economics & Business: IJEB*, *10*(1), 39-55. (în engleză)

Strumickas, M., & Valanciene, L. (2010). Development of modern management accounting system. *Inzinerine Ekonomika-Engineering Economics*, *21*(4), 377-386. (în engleză)

Topor, D., Dorin, I., & Putan, A. (2011). The role of cost information in decision-making. Case study. *Annales Universitatis Apulensis Series Oeconomica*, *2*(13), 315-324. (în engleză)

Valanciene, L., & Gimzauskiene, E. (2009). Dimensions of performance measurement system in changes research. *Izinerine Ekonomika-Engineering Economics* [Economics of Engineering Decisions], *64*(4), 41-48. (în engleză)

Zernand-Vilson, M., & Terk, E. (2009). The state and the dynamics of management and organisational development indicators in Estonian enterprises. *EBS Review*, *26*, 824.

Aplicaţii

Tabel 1. Rezumatul cercetărilor privind managementul performanţei în ţările sovietice CEE post-tranziţie

Autor	Ţară	Cadrul teoretic	Metodă	Întrebarea de cercetare	Tipul lucrării
Studii exploratorii şi identificarea principalelor caracteristici ale practicilor de management al performanţei					
Haldma şi Lääts (2002)	Estonia	Teoria contingenţei	Sondaj prin chestionare, 62 companii	Dezvoltarea practicilor şi instrumentelor de măsurare a performanţei	Articol
Haldma et al (2007)	Estonia	Teoria contingenţei	Sondaj prin chestionare, 36 companii mari	Principalele caracteristici ale performanţei	Articol
Strumickas şi Valanciene (2010)	Lituania	Abordare contingentă	Studiu de caz, 7 companii	Evoluţia sistemelor de	Articol

				management al performanţei Eficacitatea sistemelor de management al performanţei	Articol
Gimzauskiene şi Valanciene (2010)	Lituania	-	Sondaj prin chestionare, 50 companii mari		

Proces de schimbări în managementul performanţei induse de tranziţie

Valanciene şi Gimzauskiene (2009); Gimzauskiene şi Valanciene (2009)	Lituania	Cadru bazat pe dimensiunile sistemului deschis	Studiu de caz, o bancă	Cum se reflectă schimbările mediului organizaţional în performanţă	Articol Articol
Lääts (2011)	Estonia	Teoria contingenţei	Studiu de caz, 4 companii	Schimbări în sistemele contabile de gestiune şi determinanţii acestora	Teză doctorat
Laats şi Haldma (2012)	Estonia	-	Sondaj prin chestionare, 65 companii mari	Schimbări în sistemele contabile de gestiune într-un context economic dinamic	Articol

Identificarea factorilor contingenţi care influenţează proiectarea sistemelor de management al performanţei

Zernand-Vilson şi Terk (2009)	Estonia	Abordare contingentă	Sondaj prin chestionare, 145 companii	determinanţi ai utilizării instrumentelor de management al performanţei	Articol

Sursă: Irina Paladi and Pierre Fenies, *Performance management in central an eastern European countries: a literature review,* Studies in Managerial and Financial Accounting, Volume 31, 215271.

Autor	Tară	Cadrul teoretic	Metodă	Întrebarea de cercetare	Tipul lucrării

Influenţa sistemelor de management al performanţei asupra performanţei financiare corporative

Pärl (2006)	Estonia	-	Sondaj prin chestionare, 72 companii	Practicile managerilor de utilizare a informaţiilor financiare şi relaţia acesteia	Document de lucru

| | | | | cu performanţa corporativă | |

Cercetare-acţiune, îmbunătăţirea sistemelor de management al performanţei

Autor	Ţară	Cadrul teoretic	Metodă	Întrebarea de cercetare	Tipul lucrării
Pärl (2012)	Ţările baltice	Constructivism relaţional	Studiu de caz, o companie	Elaborarea modelului de comunicare pentru controlul managementului	Teză doctorat
Kloviene (2013)	Lituania	-	Studiu de caz, o companie	Propunerea de recomandări pentru îmbunătăţirea sistemului de management al performantei	Articol

Sursă: Irina Paladi and Pierre Fenies, *Performance management in central an eastern European countries: a literature review,* Studies in Managerial and Financial Accounting, Volume 31, 215271.

Tabel 2. Rezumat al cercetărilor privind managementul performanţei în ţările CEE non-sovietice în tranziţie

Autor	Ţară	Cadrul teoretic	Metodă	Întrebarea de cercetare	Tipul lucrării

Studii exploratorii, identificarea principalelor caracteristici ale practicilor de management al performanţei

Autor	Ţară	Cadrul teoretic	Metodă	Întrebarea de cercetare	Tipul lucrării
Renko şi Pecotich (2001)	Croaţia	-	Studiu de caz, 3 bănci	Cunoaşterea şi aplicarea Balanced Scorecard	Lucrare de conferinţă
Percevic (2006)	Croaţia	-	Sondaj prin chestionare, 35 companii	Utilizarea metodelor de contabilitate a costurilor	Articol
Ramljak şi Rogosic (2012)	Croaţia	-	Sondaj prin chestionare, 65 companii mari	Practicile contabile de gestiune strategică şi rolul lor în furnizarea de informaţii relevante şi utile	Articol
Autor	**Ţară**	**Cadrul teoretic**	**Metodă**	**Întrebarea de cercetare**	**Tipul lucrării**
				pentru luarea deciziilor	
Albu şi Albu (2007)	România	-	Analiză ofertelor de muncă	Examinarea practicilor de control al	Lucrare de conferinţă

				managementului și identificarea direcțiilor de cercetare viitoare	
Grosanu și Rachisan (2009)	România	-	Chestionar, 226 companii	Organizarea contabilității de gestiune in contextul centrelor de responsabilitate	Articol
Cardos și Pete (2011)	România	-	Chestionar, 146 contabili	Utilizarea tehnicilor și instrumentelor de contabilitate de gestiune	Articol
Albu, Albu, & Guinea (2011)	România	Abordare laturiană	Studiu de caz, grup de 20 de companii	Procesul de „fabricare" a unui sistem de contabilitate de gestiune	Lucrare de conferință
Almaryani și Sadik (2012)	România	-	Sondaj de chestionare, 20 contabili de gestiune	Rolul tehnicilor de contabilitate de management strategic în atingerea obiectivelor strategice, constrângerile și avantajele utilizării acestora	Articol
Racolta-Paina et al. (2013)	România	-	Sondaj de chestionare, 402 angajați	Percepția despre managementul performanței și gradul de adoptare a practicilor de management al performanței	Articol
Jinga și Dumitru (2014)	România	Teorie instituțională	Sondaj de chestionare, 62 companii	Evoluția practicilor contabilității de gestiune	Articol
Grosu et al. (2014)	România	-	Sondaj de chestionare, 114 contabili	Percepția contabililor despre starea contabilității de gestiune	Lucrare de conferință
Llaci et al. (2002)	Albania	-	Sondaj de chestionare,	Principalele caracteristici ale	

| | | | | 160 companii | managementului în companiile albaneze | |

Autor	Tară	Cadrul teoretic	Metodă	Întrebarea de cercetare	Tipul lucrării

Influenţa contextului cultural asupra practicilor de management al performanţei

Autor	Tară	Cadrul teoretic	Metodă	Întrebarea de cercetare	Tipul lucrării
Sinkovic et al. (2011)	Croaţia	-	Studiu de caz, o companie	Influenţa factorilor culturali asupra implementării Balanced Scorecard	Articol

Proces de schimbări în managementul performanţei induse de tranziţie

Kuljak (2012)	Muntenegru	Abordare instituţională	Studiu de caz, o companie	Discontinuitatea metodologică a măsurării performanţei corporative	Articol

Identificarea factorilor contingenţi care influenţează proiectarea sistemelor de management al performanţei

Albu şi Albu (2012)	România	Teoria contingenţei	Chestionar, 119 companii	Existenţa şi gradul de utilizare a tehnicilor de contabilitate de gestiune şi identificarea factorilor care influenţează utilizarea acestora	Articol

Rolul informaţiilor contabile în luarea deciziilor

Albu et al. (2008)	România	-	Analiza ofertelor de muncă	Rolul informaţiei contabile în procesul decizional	Articol
Albu, Albu, Faff, et al. (2011)	România	-	Analiza ofertelor de muncă	Rolul informaţiei contabile în procesul decizional	Articol

Autor	Ţară	Cadrul teoretic	Metodă	Întrebarea de cercetare	Tipul lucrării
Briciu, Scorte, et al. (2013)	România	-	Chestionar, 91 companii	Utilitatea informaţiilor contabile de gestiune în procesul decizional	Articol
Briciu, Topor, et al. (2013)	România	-	Studiu de caz, o companie	Identificarea metodelor adecvate de calcul al costurilor şi a tehnicilor de măsurare a performanţei pentru compania analizată	Articol

Autor	**Ţară**	**Cadrul teoretic**	**Metodă**	**Întrebarea de cercetare**	**Tipul lucrării**

Cercetare-acţiune, îmbunătăţirea sistemelor de management al performanţei

Autor	Ţară	Cadrul teoretic	Metodă	Întrebarea de cercetare	Tipul lucrării
Pintea (2011), Pintea (2012)	România	-	Sondaj prin chestionar, 23 de profesori şi 20 de analişti financiari	Propunerea unui set de indicatori pentru evaluarea performanţei generale	Articol, Teza doctorat
Topor et al. (2011)	România	-	Studiu de caz, o companie	Propunerea unui model de contabilitate de gestiune pentru îmbunătăţirea procesului decizional	Articol
Topor (2013)	România	-	Studiu de caz, o companie	Recomandări pentru îmbunătăţirea calculului costurilor prin implementarea ABC şi a tabloului de bord echilibrat	Teza doctorat
Rof (2012)	România	-	Studiu de caz, o companie	Recomandări pentru îmbunătăţirea sistemului de	Teza doctorat

| | | | | | control al managementului |

Performance Management în Management control systems in Multinational Corporations (MNC)

| Claus şi Hand (2009) | Bulgaria şi România | Perspectiva internaţională a managementului performanţei | Sondaj de chestionare, * 53 companii bulgare; * 44 companii române. | Amploarea personalizării sistemelor PM în CMN şi identificarea factorilor care influenţează deciziile de personalizare | Articol |

Implementarea Enterprise Resource Planning (ERP)

| Malinicand Todorovic (2012) | Serbia | - | Studiu de caz, 9 companii mari | Impactul implementării ERP asupra practicilor de management al performanţei | Articol |

Sursă: Irina Paladi and Pierre Fenies, *Performance management in central an eastern European countries: a literature review,* Studies in Managerial and Financial Accounting, Volume 31, 215271.

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Geomorphological characteristic of the plateaus in Northeastern Bulgaria

Abstract: The work deals with the geomorphological characteristics of the plateaus in Northeastern Bulgaria. It gives information about the geography, relief and rocks of the plateaus. Special attention has been paid to the borders, morphology, hydrography, the surface rocks, geomorphological characteristics (flat surfaces and river terraces) and the manifestation of the exogenic processes. The geomorphological analysis was carried out in connection with the use of the plateaus as a geomorphological resource. The analysis deals with the unique combination of specific relief forms, various hydrological sites, a unique landscape, natural and historical landmarks. Special attention has been paid to the nature parks, reserves, protected natural landmarks and hunting grounds in the area of the plateaus in Northeastern Bulgaria. The text is visually enriched with original map material and author's photos of characteristic sites in the area of the plateaus. In the final part of the text there are recommendations to competent local and government institutions to direct their efforts in utilizing the still unappreciated unique relief forms and natural landmarks. To do that, competent specialists should be employed, who will draw up a marketing strategy for the utilization and popularization of the natural landmarks and the cultural-historic heritage of the plateaus in Northeastern Bulgaria.

Keywords: relief forms, plateaus, paleogeomorphological development, geological formations, current geomorphological processes, geotouristic potential.

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Геоморфоложка характеристика на платата в Североизточна България

Анотация: Представеният труд е посветен на геоморфоложките характеристики на платата в Североизточна България. Предложена е информация за географията, релефа и скалите на платата. Специално внимание е отделено на границите, морфологията, хидрографията, повърхностните скали, геоморфоложките характеристики (равнини и речни тераси) и проявата на екзогенните процеси. Геоморфоложкият анализ е извършен във връзка с използването на платата като геоморфоложки ресурс. Анализът разглежда уникалното съчетание на специфични форми на релефа, различни хидроложки обекти, уникален ландшафт, природни и исторически забележителности. Специално внимание е отделено на природните паркове, резерватите, защитените природни забележителности и ловните полета в района на платата в Североизточна България. Текстът е визуално обогатен с оригинален картен материал и авторски снимки на характерни обекти в района на платата. В заключителната част на текста има препоръки към компетентните местни и държавни институции да насочат усилията си към оползотворяване на все още неоценените уникални релефни форми и природни забележителности. За целта трябва да бъдат привлечени компетентни специалисти, които да изготвят маркетингова стратегия за оползотворяване и популяризиране на природните забележителности и културно-историческото наследство на платата в Североизточна България.

Ключови думи: форми на релефа, плата, палеогеоморфоложко развитие, геоложки образувания, съвременни геоморфоложки процеси, геотуристически потенциал.

Introduction

Plateaus in Northeastern Bulgaria are distinguished by a number of specific features, mainly due to their intermediate position in relation to the orogenic structures of the Balkanides from the south and the plain placid structures from the north.

The purpose of the study is to carry out a geomorphological characterization of the plateaus in Northeastern Bulgaria, paying special attention to the natural features that can be used as an important geotourist resource.

To achieve the purpose, the following main tasks are set:

- analysis of the scientific publications affecting to one extent or another the geomorphology of the plateaus in Northeastern Bulgaria;
- determination of plateaus' boundaries and detailed morpho-hydrographic relief characteristics, leveled surfaces and river terraces;
- study of the lithologic-stratigraphic features of plateaus;
- determination of the main stages in relief development in Northeastern Bulgaria;
- analysis of the anthropogenically assimilated natural objects in the studied plateaus, which are used as a geotourist resource.

Geomorphological analysis is the theoretical-methodological basis for studying the landforms in platues of Northeastern Bulgaria, which considers the relief as a single system of tectonic structure, form and lithological content.

Various classic research methods were used during the study:

- information methods are applied both before and during the entire study;
- expeditionary field methods include reconnaissance, work and control routes, during which observations, measurements, taking rock samples, photography, primary mapping, etc. are carried out;
- cameral methods are based on a summary and synthesis of the acquired information;
- cartographic methods are related to the preparation of various maps and other graphic applications.

Having regard to its natural geographic features, Northeastern Bulgaria is well detached region of Bulgaria covering an area of 20,300 sq. km. The region includes the eastern part of the Danube Plain and the northern part of the Black Sea coastline.

The northern boundary of the area is traced along the river Danube from Batin isand, crosses the towns of Russe and Tutrakan, and reaches the town of Silistra to the east is 150 km. The western boundary is defined by the watershed line between the river Russenski Lom and the river Yantra and crosses to the south the valley of the river Golyama. From that point the boundary follows southeastward the Fore-Balkan. The eastern boundary is clearly determined by the Black Sea (*Figure 1*).

Northeastern Bulgaria is characterized by plain and hilly relief. The hilly lands occupy 54% of the territory and the rest 46% of the area is covered by lowland and plain belt.

Geological settings and paleogeomorphological development

The plateaus in Northeastern Bulgaria were formed on the periphery of the old Mysian platform (the so-called South Mysian periplatform region). In this part of Bulgaria there were risings in the fundament of Dobrudja horst step and the North Bulgarian vault swelling and sinkings in Popovo and Varna depressions. The structure of the upper part shows the development of the periplatform from the Paleozoic to the Neozoic period (*Atanasov et al.,1 1976*).

The oldest surface rocks are of the Early Cretaceous period. They can be seen in the western part, while in the east there are mainly rocks from the Paleogenic and Miocenic period.

The Quarternary deposits are: loess, clay loess, loess-like clays, surface gravels, sands and clays of the unfloodable and floodable terraces as well as materials of current morphogenetic processes (*Figure 2*).

The paleogeomorphological development of the plateaus in Northeastern Bulgaria can arbitrarily be divided into several stages (*Vladev, 2005*):

Late Cretaceous-pre-Eocenic Stage. The Black Sea depression, whose sinking influences a significant part of Northeastern Bulgaria, dates back to the late Cretaceous period.

During the transgressions the southernmost low parts of the North Bulgarian and Dobrdja swelling become part of an epicontinental sea basin. Decreased zones with active sedimentation are the presentday territories of Shumensko, Royaksko, Madarsko, Krivnensko and Dobrinsko plateaus (thickness of Late Cretaceous – 200-300 m).

Eocenic -Oligocenic Stage. From the time of Mid Eocene to the end of Oligocene the sinking went on in the territories of present day Royaksko and the western parts of Frangensko and Avrensko plateaus (Eocene-Oligocene – 400 m). Present day Shumensko, Madarsko, Krivnensko and Dobrinsko plateaus are higher.

Neocenic Stage. There is a decrease in the endogenic activity while at the same time the role of the exogenic processes increases. The pediplens gradually changed and by Mud Miocene there was a clear initial surface (peneplains). Along the upper parts of Dobrinsko, Krivnensko and Madarsko plateaus it is of a karst character, cut in Late Cretaceous and Early Paleogenic rocks. In the eastern part of Avrensko plateau the Miocene sediments are represented in a continual cut from the Chocrace to the Sarmatian. After that Avrenski block gradually rose, thus forming Late Sarmatian (layered in the south) surface. The northern part of Avrensko plateau became the highest, marking the hinge of the rise. There are still positive Tectonic movements, which started at the beginning of the Oligocene. They form the raised plateau-like arc in the south – Royaksko plateau. By the end of the Sarmatian period the tectonic movements die down and a flat Paleo relief was formed in the north. During the Pontian period Varna decline was formed north of Avrensko plateau. At the same time there was a slow epeirogenic rise of the neighbouring plateaus and a forming of denuding surfaces on them. At the end of this stage builds the oldest generation river valleys.

Plio-Pleistocenic Stage. The relief developed under the influence of the Rhone and Wallachian Tectonic phases and fluctuations of the erosive basis of the Black Sea. The exogenic geodynamics is predetermined by the warm and wet climate, the main factor for the increase of the river flow. As a result of the stage by stage of the cutting-in of the river valley network, along

the plateau slopes (mainly on the southern slopes and the secondary watersheds) several slanting (often overlapping) levels (steps) were formed. During this stage the second generation of valley systems is formed in the basin of Provadiiska and Golyama Kamchiya. In a north-northwest direction the denuding-erosive levels can be found still lower, and in some places, they are fossilized by loess deposits.

Pleisocenic Stage. The development of the relief of the plateaus is defined by the mutual influence of their Tectonic rising, the climate, the Eustatic fluctuations of the Black Sea basin and the cutting-in of the river valleys. The Pleistocenic evolution is marked by transgressions and regressions, reflecting the Glacial and Interglacial periods. Varna and Kamchiya firths developed as a result of a sinking, and sea and alluvial deposits (40-50 m thick) piled on the peripheral part of Frangensko and Avrensko plateaus. It was during the Pleistocene period that the third, the youngest generation of river valley networks – short, not deeply cut in the plateaus' river valleys by the springs and the mouths – were formed.

The deposits on the first unfloodable river terrace refer to the *Holocene period*, while the delluvial-prolluvial shleifs, the elluvial weathering covers, screes, landslides, landslips, beaches, as well as the low and high floodable river terraces date back to the Late Holocene period.

Geomorphological features and specific landforms

A number of mid-high (400-500 m) and low (300-400 m) plateaus can be found in Northeastern Bulgaria (*Figure 1*).

The *Ludogorsko plateau* (300 m) is a vast, undulating, deep chopped plateau area, with slopes mostly in the north. It is situated east of Beli Lom and north of the Popovsko-Razgradski and the Samuilovski Heights.

Within these borders Ludogosko Plateau is 80-85 km long west-east and 35-40 km wide north-south. Its latitude increases from 200 m in the north to 300 m in the south.

The bigger rivers running through the Ludogorie spring near the main watershed for Northeastern Bulgaria, forming a fan, make their way northward to the river Danube. In their upper and middle courses they indent significantly in the loess, Quaternary and Tertiary limestone forming deep dry valleys (*Figure 3*). Within the area of Ludogorsko Plateau, mainly in the chalk rock formation, are traces of *the Early Micene denuding surface*. The denuding flat is highly karstic, covered with loess and loess-like clays. Right under it at an altitude of 200-250 m can be seen fragments of a *Plio-Pleistocene denuding-accumulative surface*. Because of the absence of a clear rock section the surface is difficult to detect in some places. During the Plistocene epoch the slow rise of Ludogorsko Plateau continued, accompanied by the cutting-in of the river network and the formation of unfloodable river terraces. During the Holocene period were formed the *floodable river terraces*, formed mainly from sands, gravel and clay link.

Dobrudja Plateau (368.2 m) is 200-210 km long south to north, 60-70 km wide east to west and has an area of about 13 325 sq. km. There are two distinguishable parts of it – northern (in the Southeastern Romania) and southern (in the Northeastern Bulgaria), divided by a low section between them.

Its boeders are marked as follows: to the west-southwest by Ludogorsko Plateau; to the south by Frengensko Plateau and Devnya valley structural decline; to the east by Seasde

Dobrudja; to the northwest and north by North Dobrudja Plateau (within the borders of Romania).

In the morphography of the Dobrudja Plateau (length is 50-60 km, width is 40-60 km, area is 2750 sq. km; altitude is 325 m) a major watershed line, developed from the village Stozher (350 m) northward to the of village Rositsa (220 m), is clear notable. The mean altitude of the plateau is 300-330 m. The plateaus are deeply cut by dry valleys and in numerous places a range of ravines are developed transversely the valleys.

More significant river networks form the Suha Reka, the Batova River, the Kazalak, the Krapinets, the Karasu and the Toshevska River. As they flow through a karstic region the rivers are shallow and often dry up in summer.

In the direction of Seaside Dobrudja, west of the line of the villages of Rositsa-Kraishte-Pisarevo-Snyagovo-Momchil at an altitude – 100-250 m *the crust is flat Pliocene*. East, north and northwest of Dobrudja Plateau at an altitude of 130-170 m can be found a flat – an old *abrasive-accumulative level. The Pleistocene-Holocene development* could be followed through the river terraces.

The borders of *Lilyaksko Plateau* (516.9 m) are defined as follows: to the north by the southern periphery of Razgrad Heights; to the northeast by Trapishte structural decline; to the east by Targovishte substructural decline; to the south by Omurtag block; to the southwest by Antonovo Heights and to the west by the decline with a center in the vicinity of the village Svetlen. Within these boundaries Lilyakovsko Plateau has approximately the following measures: 7.5 km long west-east-north, south – 15 km; 10 km wide north-south to the west, 7.5 km to the east. The area of Lilyaksko Plateau is 96.32 sq. км.

The slightly inclined to the west slopes of the plateau are strongly segmented in a subparallel direction by the Chetni Lom River tributaries and the valley of the Dermendere is strongly cut in. The southern and eastern slopes of Lilyaksko Plateau are steep and the northern are slanting with a slight incline.

The initial surface appearing on the ridge of has an old origin. Polyfacial, defossilized and replaned it is formed in subhorizontal Early Cractaceous rocks. Its mean altitude is 450-500 m. In the western part the structural surface appears in the highest part of the slope in the shape of an almost vertical cornice. In a western direction can be seen, slanting towards the river valleys, *Plestocene surfaces*. The higher ones are erosive and the ones in the lower part of the slope have a mixed erosive-accumilative character. They are situated one below the other at a height of 300-340 m and 250-300 m.

Shumen plateau (501.9 m) is situated in the south-western part of north-east Bulgaria. The plateau is a separate block of the Misia table, segmented along its periphery by bay-like river valleys (*Figure 4*).

The plateau is bordered by: to the north – the valleys of the rivers Strazhka, Pakosha and Chairdere; to the north-east – the upper part of the Matnishka river; and to the southwest – part of the Kamenitza river watershed; to the east-southeast – Shumen-Smyadovo lowlands with part of the Golyama Kamtchia river valley; to the south and west Targovishte substructural lowlands with part of the Vrana river valley. Shumen plateau is about 12 km long in west-east direction; its length changes in south-north direction – from 7-8 км in its southernmost part, to 9-10 км in the central part, to 11-12 a bit more to the north and to about 20 km in the

northernmost part. In north-south direction in its width varies between 15 and 17 km. The total area of the plateau is 73.13 sq. km.

From a geomorphological point of view the relief of Shumen plateau can be divided into three parts – ridge, slopes, and foot. The ridge is undulating with a karsts' relief with predominating slanting slopes and segmentation. The slopes of the plateau are quite segmented differentiating in steepness and manifestation of current morphogenetic processes. The foot of the plateau is in the altitude range of 180-200 m (from the south) and 250-330 m (from the east and the north) and most of the land is arable.

The current manifestation of the morphogenetic processes in the plateau is defined both by the weather conditions and the armouring effect of the sub-horizontal Maastricht limestone. The latter form perpendicular slopes, rock wreaths, landslides, landslips and taluses.

There is a big active landslide along the eastern slope of the plateau with a four-lane highway passing along it. Two landslide zones, going to old gullies now covered by the road, are discernable within it.

A landslide complex of several big ones and a large number of smaller detrusive landslides can be found along the western slope of Shumen plateau, west and northwest of Tarnovtabiya peak (501,9 m). This section is about 5 km long (*Figure 5*).

Karsts processes are well defined in Shumen plateau as they form: more than 200 eddies, more than 160 hollows, as well as gorges, dead-end karsts dales, karsts springs, fields and karsts rock wreaths, karsts niches and caves.

The geomorphological evolution of the Shumen plateau can be traced by the size and the characteristics of the denuding surfaces and river terraces (*Figure 6*).

The borders of *Voivodsko Plateau* (475.8 m) are defined as follows: to the west by Samuil Heights; to the north, northeast and east by the valley of the Kriva Reka (48 km long, with water catchment area of 220 sq. км); to the south border lies along the line between the villages of Iglika-Zhivkovo-Praventsi-Izbul. Voivodsko Plateau is 11-12 km long, 5-7 km wide, with an area of almost 57 sq. km.

Voivodsko Plateau is drained by the the right-hand side tributaries of the Kriva Reka – short and shallow often drying up in summer (*Figure 7*).

Between Haidara locality and Mogilata peak there is a valley enlargement and the rivers draining the central part of Voivodsko Plateau flow towards it in a fan-like form.

Piles of broken rocks can be found at the foot of the plateaus (*Figure 8*).

There are two or three denuding surfaces on Voivodsko Plateau. The highest *Sarmatian-Pontian surface* encompasses the flat ridge of the plateau. From 450 m in the central part it drops down in the north to 350-320 m. Then follow several superimposed *Pleistocene steps* hanging over the river valleys (*Figure 9*).

Stana Plateau (440.9 m) has an oval shape elongated in the direction of northwest-southeast with symmetrical sides.

The borders of the plateau are defined as follows: to the west and northwest by the valley of the Kriva Reka, which separates it from Kaspichansko structural decline and Voivodsko Plateau; to the south by the valley of the Provadiiska River and the short Chatakdere River, which serve as a border with Krivnensko Plateau; to the east and northeast by the valley of the Zlatina River and Zlatinsko-Vetrinsko structural-denuding decline and to the north by the

valleys of the rivers Kavakdere and Tolumdere, which separate the plateau from the southern periphery of Ludogorsko Plateau. The total area of Stana Plateau is 183 sq. км.

On the surface of Stana Plateau we can find some flat areas: *layered* – at an altitude of 380 to 440 m, *Sarmatian-Pontian* – developed along the ridge of the platea in a southeast-northwest direction at an altitude from 240-260 m to 320-340 m and several *Pleistocene slope steps* fixed at an altitude of 140 to 220 m (*Figure 9*).

The Quarternary period is marked by several terrace levels, developed along the valleys of the rivers going down the slopes. Delluvial and delluvial-prolluvial shleifs, 10-12 thick, can be found north of the village of Nevsha. A significant part of the deforested slopes of the plateau is taken up by gullies. They are from 5-6 to 10-12 m deep (*Marinov, 1991*).

Provadiisko Plateau is bow-shaped with a length of 70 km, width of 2-3 to 15 km and an area of 371 sq. км (*Figure 10*). The borders of Provadiisko Plateau can be defined as follows: to the north by Shumensko-Smyadovsko decline; to the northwest by Kaspichansko substructural decline; to the north by Stana Plateau and Zlatinsko-Vetrinsko decline; to the northeast and east by Devnensko and Varnensko declines; and to the south and southeast by Provadiisko structural-denuding decline. The plateau is drained by some tributaries of the Provadiiska River, the longest of which is the Glavinitsa River (40.8 km long).

Several relatively independent blocks can be distinguished in Provadiisko Plateau – *Madarski (*length of 12 km from east to west, width of 2-3 km from north to south and an area of 28 sq. км), *Krivnenski* (length of 65-70 km, width of 2-3 up to 10 km and an area of 285 sq. km) and *Dobrinski* (an area of 58 sq. км), which are separate plateaus. There are two or three denuding surfaces on Provadiisko Plateau.

The northern, northwestern and western slopes of the *Madara plateau* (429.8 m) are vey steep, in some places almost vertical, in a small section in the western part even overhanging.

There are a number of cracks in the vicinity of the *Madara Horseman* which enable the separation of the peripheral parts of the plateau. Some of them cut the whole thickness of the armoured limestones reaching the bottom of the vertical slopes (*Figure 11*).

The geomorphological evolution of this part of Northeastern Bulgaria can be traced by the size and the characteristics of the denuding surfaces (*Figure 12*), river terraces and the manifestation of current morphogenetic processes.

Under the influence of tectonics, the specific rock composition, the gradient of the slope and the climate in the region of the Madara Plateau have been observed increased landslip-landslide processes, which in some places could be hazardous for the visitors.

The foot is of 1-2 km wide landslip-landslide terraces, delluvial and delluvial-prolluvial shleifs.

Krivnensko Plateau (476 m) is bow-shaped, stretching from southwest to northeast with a length of 65-70 km, width of 2-3 up to 10 km and an area of 285 sq. km. There are two prevailing hypsometric belts in the region of the plateau – from 200 to 300 m and from 300 to 400 m.

The ridge flat is covered by a *layered subhorizontal surface* situated at a height of 240 to 400 m. On the eastern and southern slopes of Krevnensko Plateau at the height of 120 to 200 m can be found one or two *villafranca flat foot levels*. In most places they have the characterstics of a slope step (*Figure 12*).

The valleys of the rivers starting from Krivnensko Plateau – the Haramiyata, Kosovska, Kalaidjideresi, Veredere, etc, are deeply cut into the rock complexes.

In the lower break on the slope of the plateau one can find a wide band of rock materials that have slid down and form delluvial and delluvial-prolluvial shleifs. The results of karst processes are also well defined on the slopes of the plateau. On the steep northern slopes of Krivnensko Plateau one can find cut-in short and deep gullies, called by the local population *boazi* (*Figure 13*).

The linear erosion is represented by a number of erosive furrows and gorges. Between the village of Zlatina and Vasil Kolarov station the Provadiiska River flows through a deep gorge with a length of about 10-12 km, which separates Krivnensko plateau fron Dobrinsko Plateau.

Dobrinsko Plateau (360 m) is oval-shaped with slanting southern and steep northern slopes. The southetn slopes are segmented into two symmetrical parts by the valley of the Manastirska River (*Figure 14*).

The borders of the plateau are defined as follows: to the west by the gorge of the Provadiiska River from the village of Zlatina to Vasil Kolarov station; to the south by the southeastern parts of Provadiisko structural-denuding decline; to the east by Devnensko decline with the valley of the Devnenska River; to the northwest by Vetrinsko decline. Within these boundaries Dobrinsko Plateau has an area of 58 sq. км.

The upper part of Dobrinsko Plateau has a layered surface at the height of 210 to 250 m, composed of organogenic and sandy limestones armoured in sandstones. The surface is slightly inclined from north to south. Immediately beneath the surface flat one can find delevelled *villafranca slope steps*. The widest of them are on the southern slope, which is not that steep (*Figure 12*).

The northeastern slope of Dobrinsko Plateau is interspersed with a number of gullies (from 50-100 to 200-750 m long, from 3-5 to 12-14 m deep), with a lot of steep and vertical slopes, developed in delluvial deposits. (*Marinov, 1991*). The slope has undergone such a significant change because of erosion that it looks like a typical badland.

Royaksko Plateau (410 m) is eliptic in shape, extended from west to east with a length of 38 km, width from 250 m to 7-8 km and an area of almost 163 sq. km (*Figure 15*).

The borders of the plateau are defined as follows: to the north, northeast and east by Provadiisko decline; to the south by the valley of Kremen Dere; to the west by Shumensko-Smayadovsko and to the southeast by Dolnokamchiisko decline; to the northwest by Provadiisko Plateau substructural decline.

Layered surface at a height of 300 to 360 m is formed on the ridge of Royaksko Plateau. It is deformed in some places by local swellings and depressions. Northeast of the villages of Sladka Voda and Boryana one can find slope *Plio-Pleistocene* (villafranca) steps at a height of 140 to 180 m (*Figure 12*). Some of them are erosive-denuding while others are mainly accumulative.

The river valley network is short because of the configuration of the plateau. There are flat platforms of high river terraces at a height of 70-90, 50-60, and 35-40 m on the western and southern slopes of the plateau.

Frangensko Plateau. The borders of Frangensko Plateau (with an area of 360 км; 377.8 m) are defined as follows: to the north by the valley of the Batova River; to the east by the Black

Sea; to the south by Varnensko decline; to the west by the watershed between the springs of the rivers Batova and Suha Reka.

The oldest forms of the plateau relief are the denuding surfaces (*Figure 12*). The highest of them at an altitude of 300 to 320 m developed during the Late Miocene, formed on horizontal and subhorizontal armoured Sarmatiah sediment rocks. An *old abrasion-accumulative (Pontian) level* can be seen on the southern, northern and eastern slopes of the plateau. It is 320 m. north of the valley of the Kranevska River.

The southern slope of the plateau that runs north of the city of Varna through Vladislavovo quarter, the villages of Axakovo, Dobrogled and Kalimantzi is well defined morphographically.

The most common forms defined by the current morphogenetic processes are the *landslides*.

To the south the slope gradually or by steps in a narrow band, interspersed with a landslide system, goes down to the floodable terrace of Varna and Beloslav Lakes. The lower border of the landslide swathes is marked by small hills.

Along the whole eastern slope of Frangensko Plateau (16 км long and 700 m to 4,5 км wide) is one of the widest landslide complexes along the Bulgarian Black Sea coast. Active (63.24%) and potential (19.12%) landslides are dominant. The stabilized landslides comprise only 13.24 % and 4.41% have not been investigated yet (*Geozashtita Newsletter, 2018*).

Avrensko (Momino) Plateau. Avrensko Platau (328.8 m) has a rectangular shape, elongated in west-east direction with a maximum length of 28 km, width of 18 km an area of 410 sq. км.

There is a *layered surface* (at a height of 250 to 300 m) and up to two villafranca underfoot levels (at a height of 90 to 140 m) easily seoparated on Avrensko Plateau (*Figure 12*).

The rivers draining Avrensko Plateau are short and shallow. There is a clear asymmetry of the river valleys – short northern valleys and two or three times longer southern ones.

Significant ravine formations can be seen along the steep slopes of the plateaus. Alluvial cones have been formed near the mouth of the rivers where there are sudden changes in the incline, mainly at the northern foot of the plateaus. The entire eastern part of Avren Plateau is covered with landslides and landslips.

The geotouristic potential of the plateaus in Northeastern Bulgaria

The touristic potential of the plateaus in Northeastern Bulgaria is determined by the unique combination of temperate climate, specific relief forms, a variety of the hydrological sites, a unique landscape, natural, and historical landmarks.

The most developed forms of tourism in the region of the plateaus are: recreational tourism, ecotourism, sports tourism, hunting tourism, educational and cultural-historical tourism.

The most often visited places are the Black Sea resorts in the eastern periphery of Avren, Frangensko and Dobrudja Plateaus. This is where the big resort complexes – *Rusalka, Albena, Golden Sands, St. St. Konstantin and Elena, Riviera,* etc. are situated. Recreational tourism is favoured by the presence of sea water combined with a large number of beaches, a cliff shore with various rock forms, beautiful bays, a lot of mineral springs, healing mud, etc.

A somewhat negative effect on the development of the sea tourism is caused by the current landslide processes along the entire seaside zone of Avren and Frangensko Plateaus.

The rich network of *nature parks*, *reserves*, *protected natural landmarks* and hunting grounds in the area of the plateaus in North-Eastern Bulgaria is a potential for the development educational, ecotourism, hunting tourism and other forms of alternative tourism.

Approximately 3,896 hectares of the upper part of the Shumensko Plateau have been turned into a nature park and 90.1% of the whole territory of the park is forested. The Bukaka Reserve is situated here. The prevailing type of tree is the Misia beech. On the eastern slopes of Shumensko Plateau the most popular region is Kyoshkovete forest park.

Due to its more or less flat relief Shumensko Plateau is particularly suitable for bicycle tourism and some of its steep slopes for rock climbing. One of the most preferred places for paragliding in Bulgaria is situated on its eastern slope. Quite popula are also localities like Khan Krum's Gates, Hisarlaka with Stariya Grad historic-arcaelogical reservation, Visoka polyana locality, monument "1300 years of Bulgaria", Biserna Cave, rock phenomenon "Snail", Rock monasteries (*Figure 16*), etc.

The Biserna Cave is the longest and most beautiful cave on Shumensko Plateau. It got its name because of the beautiful cave formations and the constantly falling drops of karst water. It was formed about 3.5 mil years ago. It was urbanized in 2016 and about 800 m are accessible for tourists. An underground river, fed by more than 40 eddies, runs along its lower floor. It is the habitat of 14 different kinds of bats.

In the area of the Madara Plateau is the *National Historical-Archaeological Reserve "Madara"* (1958). Its territory encompasses the *protected territory of Madara rock wreaths*. An area of 3,691,336 decares covers a protected territory of habitats of petrophile and protected animal species and finds of rare plant species.

The beautiful nature, the inaccessible cliffs with their caves and niches, as well as the abundant water are favourable prerequisites for the settlement of the region as early as antiquity. The Madara Plateau has been inhabited for more than 5000 years. Record from six historical epochs have been found in the area of the Madara Plateau, that is why the first explorers of the region called Madara the *Bulgarian Troya*.

The most remarkable monument of VII century is the life-size horseman with a spear in his hand hewn into the cliff-face 23 m above ground level (*Figure 17*).

One of the biggest medieval rock monasteries in Bulgaria was built in the vertical western slope of the Madara Plateau in the 14th century. It included more than 200 natural caves and niches situated at different levels along the cliff wreath, used as monk cells, chapels, churches and tombs. One of the big caves was used as a church. It is the still used *St Panteleimon* rock chapel (*Figure 18*).

In 1979, at the World Congress in Luxor (Egypt), The Madara Horseman was included as a UNESCO Heritage Site and on June 29, 2008, after a long public dispute it was declared Bulgaria's global symbol. In 2008, it was decided that The Madara Horseman would be depicted on the first Bulgarian *Euro coin*.

The region of Krivnensko and Dobrinsko plateaus offers perfect conditions for ecotourism. Particularly picturesque is the Provadyiska River Canyon between the village of Mogila and the town of Provadyia. It cuts through the northern edge of Krivnensko Plateau, thus separating a number of smaller plateaus, hillocks and picturesque rock wreaths. The

maximum depth of the canyon is about 250 m. There is an eco path from the bottom of the *Kaleto* locality to the *Tabiite* locality.

There are 32 archeological sites in the Municipality of Provadiya, the most often visited being *Ovech Fortress, the Thracian Sanctuary and St. Georgi and Kara Peshtera rock monasteries.*

Eco tourism can also be organized in the *Provadiysko-Royaksko Plateau protected area* and its protected territories Snezhinska Kuriya, Slaveykovska Gora, Golyamata Kanara, Pobitiya Kamak and Petrovdolsko Gnezdovo Nahodishte. Provadiysko Plateau offers also the possibility of a specific kind of eco tourism – ornithological one, as the plateau is the habitat of 118 different birds, 18 of which are in Bulgaria's Red Book, and 63 are of European environmental significance.

Of particular interest is the *Pobitite Kamani (Standing Stones)* natural phenomenon – columns of 3 to 10 m high at 5 levels (30 m) in 5 groups and 18 areas in the western part of Frangensko and Avrensko (Momino) Plateau (*Figure 19*).

Pobitite Kamani are unique geological formations, which in their degree of preservation and imposing appearance have no analogue in the world. The columns are concentric and contain microbial carbonate. Their inner part is built up of sands, so that some of them are hollow (*Nachev & Nachev, 2001*).

They were declared as a protected territory in 1995, and from 2002, they are a protected area of 253.3 ha. Different archeological finds have been discovered in the area such as stone and flit knives, hammers and axes, arrow points and so on. There are unique representatives of flora and fauna, mainly species that do not need wet conditions. Pobitite Kamani is one of the most often visited nature site due to its closeness to the big touristic complexes along the Black Sea coast.

The *Yatata* protected area (Strashimirovsko Marsh) is situated at the northern foot of Avren Plateau, close to the canal between Beloslav and Varna lakes. It is a region where aquatic birds spend the winter season. More than 20,000 aquatic birds live here annually, 79 species of which are included in Bulgaria's *Red Book*.

The medieval fortress *Petrich Kale* (*Figure 20*), situated in the north-eastern part of Avren Plateau also attracts a lot of tourists. The fortress is naturally protected – to the west and north by vertical 35-metre-high cliffs; to the east and partially to the south by deep steep ravines. It was accessible only from the south by a narrow rock path, connecting it with the main part of Avren Plateau.

The smallest nature park in Bulgaria, *Zlatni Pyasatsi*, or *Golden Sands*, (13.2 sq. km) is situated in the eastern part of Frangensko Plateau. It was created in order to preserve the natural coastal ecosystem in which different types of trees and bushes occupy about 90% of its area. One of the most often visited touristic sites *Aladja Monastery* is situated here.

Northeast of the Goden Sands NP is situated the *Baltata Reserve*. It occupies the lower part of the Batova River. This is the northernmost part of the European floodplain forest. More than 260 higher plants (28 of them protected), more than 180 different birds, 36 kinds of mammals, 15 kinds of amphibians and 16 kinds of fish can be found here. The reserve is guarded but tourists are allowed to visit if they keep to the strict rules.

Southeast of Dobudja Plateau is situated the famous Balchik Touzla and the Cape Kaliakra natural phenomenon. *Balchik Touzla* is a balneological resort that uses healing mud obtained

from two lakes located at the foot of a steep sea shore amid a large landslide. *Cape Kaliakra* is the longest cape on the Black Sea coast, the final part of a narrow peninsula. The shore is comprised of vertical reddish cliffs about 70 metres high. The only cave archeological museum in Bulgaria is situated in its southwestern part. Kaliakra is a nature reserve with karst landscape and unique wild life. More than 450 kinds of steppe vegetation can be found here, 45 of which are rare, endangered, or endemic species. There are also dolphins, seals, cormorants, starlings and rock black birds.

North of Cape Kaliakra is the *Bolata Marsh* (a marshy firth) and the *Taukliman (*bird firth*) lake-lagoon,* the habitat of many aquatic birds.

A number of hunting grounds in Northeastern Bulgaria are also attractive for specialized tourism (*Figure 21*).

The main centre of the hunting grounds in northeastern Bulgaria is the *Palamara* state hunting ground, where red deer are bred and sent to other hunting grounds. The fallow deer is less popular and can be found in the open areas of Ludogorsko Plateau.

Discussion

The relevance of the presented topic is based on the fact that plateaus in Northeastern Bulgaria are not yet sufficiently well studied from a natural-geographical point of view. This gives reason to carry out complex and local natural-geographical studies in the area of the plateau in the future in the field of geology, geomorphology, soils, hydrology, climate, vegetation, and animal life.

This gives reason to carry out future complex and local natural-geographic studies in of plateaus area in the field of geology, geomorphology, soils, hydrology, climate, flora and fauna.

An important problem related to the practical application of geomorphological studies is the large-scale mapping of the researched territories. Such maps can be used in various spheres of public life – agriculture, land melioration, urban, industrial, and road construction, development of urban territorial plans, etc.

In the plateau region there are many important archaeological sites, some of which are well studied, but a number of mounds, caves, cave niches, impressive rock complexes, etc. remains unexplored. There are well-established methods of geomorphological research of such objects that can be successfully applied. Modern technical means, such as ground-penetrating radars, that allow research to be carried out without causing serious damage to the natural environment.

It is imperative to first identify unexplored impressive rock and landforms that may be of tourist interest. Such are, for example, a number of megalithic rock niches and caves on the periphery of the plateaus - Shumensko, Madarsko, Krivnensko, Avrensko, Frangensko, etc., as well as deposits of ordered and unordered poorly worked stone blocks (menhira) in the areas of the town of Pliska, Zlatna niva village, etc. After selection of the objects, it is necessary to prepare projects for their detailed local interdisciplinary study, in which geodesists, historians, geologists, geomorphologists, physicists, etc. can be involved. In final stage of this research, the most impressive of the studied sites can be included in new tourist routes.

Conclusion

The plateaus in Northeastern Bulgaria have a great touristic-resource potential, which unfortunately is not utilized rationally enough.

Despite the presence of a number of impressive relief forms and unique natural and archeological landmarks only few of them have a touristic infrastructure and consequently only some of them are used as touristic resources.

It should note that it is extremely important to find a balance between the rational use of the natural touristic resources of the plateaus in Northeastern Bulgaria and their environmental protection. Undoubtedly such a balance will guarantee the stable development of the regions from touristic and environmental viewpoint, by managing and integrating ecological, landscape and cultural values of the plateau regions and the development of the municipalities. The protection of the natural recreational-touristic resources is a very important part of the entire environmental policy.

In conclusion we can recommend to competent local and government institutions to direct their efforts in utilizing the still unappreciated unique relief forms and natural landmarks. To do that, competent specialists should be employed, who will draw up a marketing strategy for the utilization and popularization of the natural landmarks and the cultural-historic heritage of the plateaus in Northeastern Bulgaria.

Information

References:

Angelova, D. (1995). Neotectonics and geodynamics of the Madara Plateau. *Problems of Geography*, *2*, 75-84. (in Bulgarian)

Atanasov, A., Boyadzhiev, St., & Cheshitev, G. (1976). *Tectonic map of P.R. Bulgaria M 1:500000*. (Ed. I. Sm. Iovchev).

Baltakov, G. (2003). *Neogene and Quaternary sculptural geomorphogenesis of the eastern part of Balk*. Author's abstract of a dissertation.

Filipov, L., & Mikova, L. (1982). The Quaternary sediments between the cities of Shumen. Varna and the valley of the Kamchia River. *Bulgarian Geological Society*, *XLIII*, *2*, 147-158.

Georgiev, M. (1991). *Physical geography of Bulgaria*. Sofia University "St. Kliment Ohridski".

Geozashtita Newsletter (2018). Varna. (in Bulgarian)

Glovnya, M., & Velchev, A. (1972). Geomorphological development of the eastern part of the Shumen Plateau. *GGF*, *2*. Sofia University "St. Kliment Ohridski".

Glubov, Zh. (1959). Morphology of the Provadiy Gorge and the neighboring parts of the Provadiy Plateau. *Collection in Honor of Academician A. Bezhkov*, 163-184. BAS.

Information Newsletter (2015). Project BG161PO001/3.3-01/2008/001-11 Communication campaign for encouraging the internal tourism in the Republic of Bulgaria, 3 (January, 2015).

Kanev, D. (1989). *Geomorphology of Bulgaria*. Sofia University "St. Kliment Ohridski".

Map of the Landslides in Bulgaria (Scale 1:500000) (2006).

Marinov, G. (1991). The Role of the Lithological Factor for the Development of the Lineal Erosion in Provadiisko and Royaksko Plateau. *Problems of Geography*, *2*, 71-77. (in Bulgarian)

Nachev, I., & Nachev, Ch. (2001). *The Standing Stones – Bacterial-Seaweed Columns*. Sofia. (in Bulgarian)

Velchev, A. (2014). *General geology and geomorphology*. "St. St. Cyril and Methodius" University Publishing House, Veliko Tarnovo.

Velchev, A., & Petrov, P. (1972). Morphostructural features of the Stana plateau. *GGF*, *67*. Sofia University "St. Kliment Ohridski"

Vladev, D. (2020). Geomorphological features of Ludogorsko Plateau. *American Journal of Multidisciplinary Research & Development (AJMRD)*, *2*(10) (October, 2020), 51-54.

Vladev, D. (2019). Current risky geomorphological processes for tourists in the area of the Madara historical-archeological reserve. *Proceedings the 2nd International Scientific Conference – Challenges of tourism and business logistics in the 21st century "isctbl 2019" (September 13, 2019)*, 105-114. North Macedonia, Stip.

Vladev, D. (2018). Structural-geomorphological study of the Dobrudzha plateau. *Journal SocioBrains (Fevruary, 2018)*, 82-89 (in Bulgarian)

Vladev, D. (2015) Morphostructural study of the Lilyak Plateau. *Proceeding Papers for 4th International Scientific Conference "Geografical sciences and education"*, 35-40. Copyright Center "K. Preslavsky" University (in Bulgarian)

Vladev, D. (2014). Structurally-geomorphological study of the Madara Plateau. *Proceeding Papers for the 3rd international Scientific Conference "Geografical sciences and education"*, 31-36. Copyright Center "K. Preslavsky" University. (in Bulgarian)

Vladev, D. (2012). Geomorphology of Dobrynsko Plateau. *International Conference "40 years of Shumen University 1971-2011"*, 130-139. K. Preslavski University Publishing House. (in Bulgarian)

Vladev, D. (2011). Morphostructural features of Royaksko plateau, Bulgarian academy of sciences. *Problems of Geography*, *1-2*, 134-143. (in Bulgarian)

Vladev, D. (2009). Geomorphology of Frangensko Plateau. *Annual of „Konstantin Preslavsky" University of Shumen, Natural Sciences, Earth Sciences*, *XIX*, *4*, 4-25. Copyright Center "K. Preslavsky" University (In Bulgarian)

Vladev, D. (2005). *Geomorphology of Provadiisko-Kamchiisko structural decline*. Author's abstract. (in Bulgarian)

Vladev, D. (2003). Structural and geomorphological study of the Avren (Momino) Plateau. *Collection of Scientific Papers – Natural Sciences*, 197-201. Copyright Center "K. Preslavsky" University. (in Bulgarian)

Vladev, D., & Lazarova, R. (2020). Morphohydrographic, geological, and geomorphological characteristics of the Shumen Plateau. *SYLWAN*, *164*(12).

Vladev, D., Krastev, T., Stankova, S., Chenkova, N., & Penerliev, M. (2008). Natural-Geographic potential of north-eastern Bugaria and its meaning for the cross-border cooperation with Romania. *Geographical Phorum. Geographical Studies and Environment Protection Research*, *7*, 233-247. University of Craiova. (in Bulgarian)

Appendix
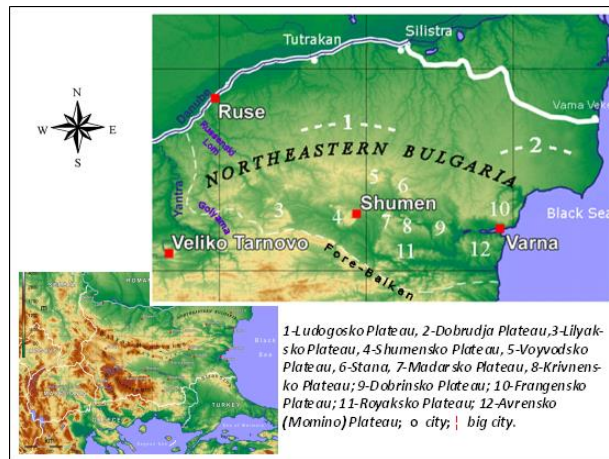
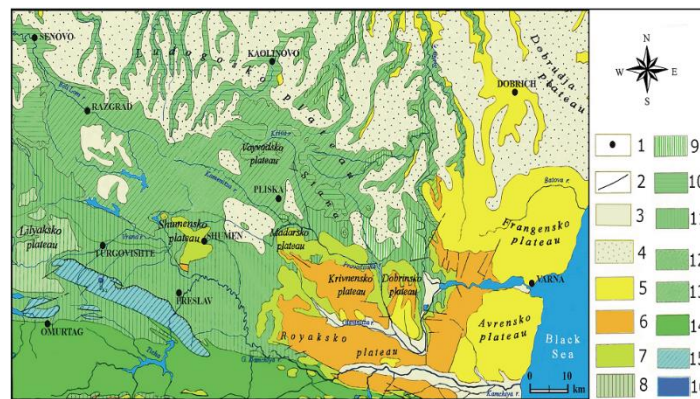Figure 1. Location of the Northeastern Bulgaria

Figure 2. Geologic map of Northeastern Bulgaria

1 – Big sity; 2 – Fault; 3 – Alluvial sediments (pebbles and sands of flood-plain and higher terraces; beach terraces and beachsands; swamp deposits); 4 – Eolian sediments (loess, sandy loess, clayey loess); 5 – Miocene (limestones, glays sands with clay interbeds, kaolin-sand, conglomerates sands and glays); 6 – Paleogene (marls, locally with interbeds of detrital sandstones, glayey sands, sandstones and sands, nummulites limestones); 7 – Upper Cretaceous (limestones, carbonate rocks); 8 – Lower Cretaceous, Aptian-Albian (sandstones and marls); 9 – Barremian-Aptian (Urgonian tupe limestones, conglomerates, sandstones, clays); 10 – Hauterivian-Aptien (limestones, clayey limestone); 11 – Hauterivian-Aptien (marls and clayey, marls with sandstone interbeds); 12 – Clayey limestone formation and in upwards succession of sandstone, siltstone and clayey limestone formation on and para; 13 – Lower Cretaceous (clayey limestones and marls); 14 – Valanginian-Hauterivian (thick packets of sandstones and marls); 15 – Jurassic-Cretaceous, Tithonian-Valanginian (marls and clayey limestones); 16 – Middle-Jurassic, Shales, flysch (alternation of shales and sandstones, with olistolites of Lower Jurassic and Triassic rocks)

Figure 3. View from the Ludogorsko plateau
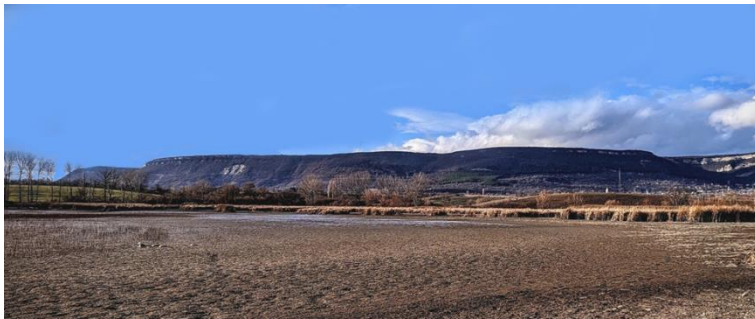
Figure 4. The eastern part of the Shumen plateau
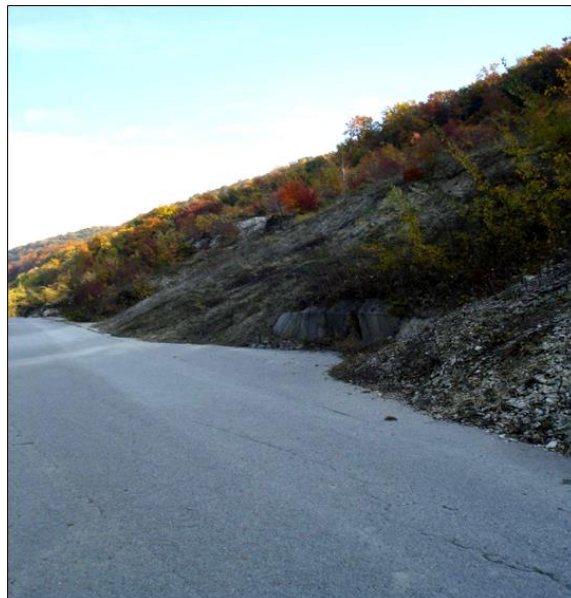
Figure 5. Landslide activity along the western slope
of Shumen plateau, above the road from the village
of Kochovo to the villages of Novosel and Lozevo

Figure 6. Geomorphological map of the Shumen plateau

1 – low Plio-Pleistocene (villafranca) level; 2 – high Plio-Pleistocene (villafranca) level; 3 – river valleys with alluvial deposits; 4 – cone with overlays; 5 – erosive slopes; 6 – landslides; 7 – ravines; 8 – border line; 9 - self-protruding rocks; 10 – subhorizontal layered surface; 11 – river accumulation surface; 12 – plateau with rocj wreaths and cuts; 13 – karst slope; 14 – a small structural erosive knoll; 15 – fossilized faults; 16 – leap.

Figure 7. The valley of the River Kriva with the northern slope of the Voivodsko Plateau

Figure 8. Landslide in the villafrank limestone rocks above the village of Stanovets

Figure 9. Geomorphological map of the Voivodsko and Stana Plateau

1 – low Plio-Pleistocene (villafranca) level; 2 – high Plio-Pleistocene (villafranca) level; 3 – river valleys with alluvial deposits; 4 – erosion-accumulation surface and river terraces covered with clay loess; 5 – erosive slopes; 6 – landslides; 7 – ravines; 8 – border line; 9 - self-protruding rocks; 10 – subhorizontal layered surface; 11 – river valleys with alluvial deposits; 12 – plateau with rocj wreaths and cuts; 13 – Sarmatian-Pontian surface; 14 – a small structural erosive knoll; 15 – fossilized faults; 16 – faults.

Figure 10. View from Provadia Plateau

Figure 11. Landslip in front of the entrance to the Nimfite cave
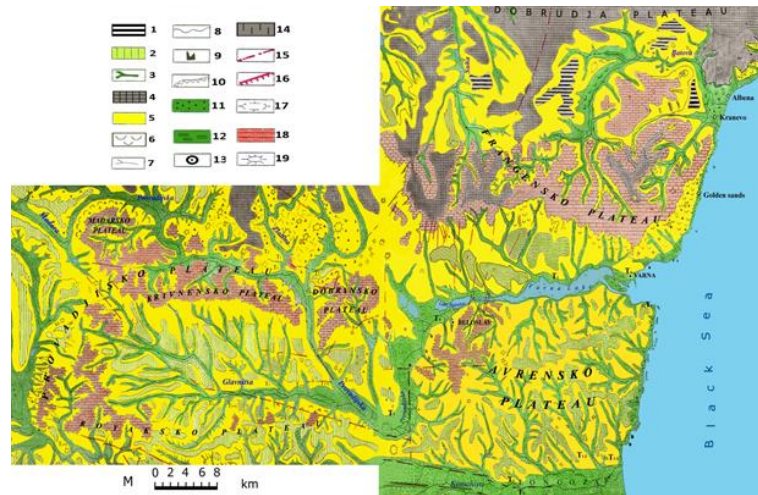
Figure 12. Geomorphological map of the Provadijsko (Madarsko, Krivnensko, Dobrinsko), Royaksko, Dobrudzhansko, Frangensko and Avrensko Plateau

1 – Pliocene level; 2 – Plio-Pleistocene (villafranca) level; 3 – river valleys with alluvial deposits; 4 – erozionno-accumulative and river terraces, covered with loam; 5 – erosive slopes; 6 – landslides; 7 – ravines; 8 – current beah line; 9 – underwater rocks and separate jutting land rocks;10 – cliff shorer; 11 – river, sea and river-sea accumulative surface; 12 – new Black Sea terrace (1.5-2 m and 3-5 m); 13 – settlement; 14 – old abrasion-accumulative level; 15 – fossilized faults; 16 – fault structures with mounts; 17 – plateau with rocj wreaths and cuts; 18 – subhorizontal layered surface; 19 – a small structural erosive knoll.

Figure 13. Karst valley on the river Sersem Dere

Figure 14. Panoramic photo of Dobrynsko plateau

Figure 15. Panoramic photo of the northern slope of the
Royaksko plateau
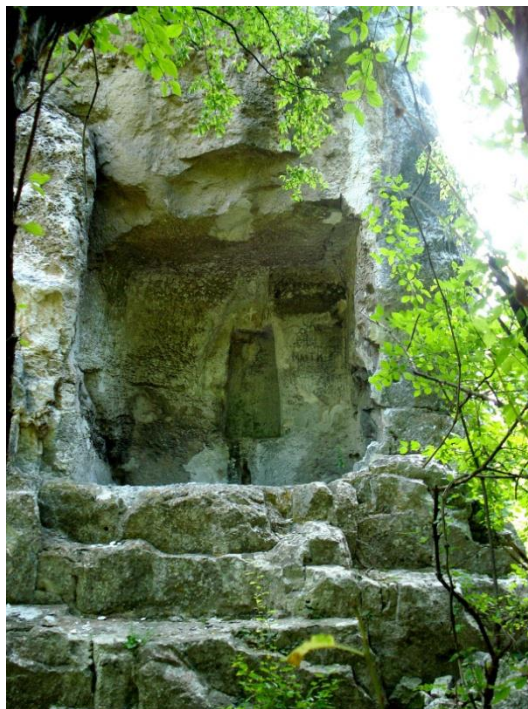
Figure 16. Chapel in the area of the Rock Monasteries

Figure 17. The Madara Horseman

Figure 18. St. Panteleimon Chapel

Figure 19. Disclosure of quartz sands in the
Pobitite Kamani

Figure 20. Petrich kale
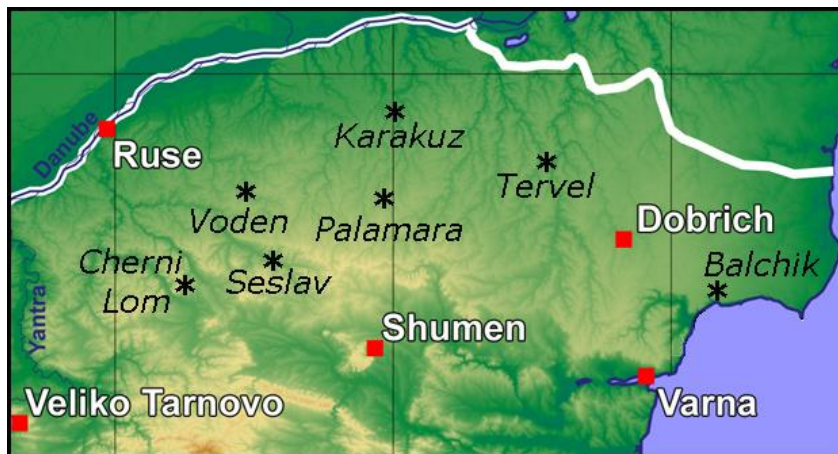
Figure 21. Map of the hunting grounds in Northeastern Bulgaria

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Contemporary aspects of geographical education in Bulgaria in the context of globalisation

Abstract: The topicality of the researched subject is related to the intensified process of globalization in the beginning of the 21st century, which affects all spheres of life. This not only affects the policies pursued in them, but also leads to the formation of new sustainable moral values. The educational sphere is one of those that directly reflects the occurring changes in social attitudes and transforms them in the form of educational goals. In this way, globalisation processes implicitly influence the present and future generations of all countries in the world. The object of the research is related to the process of globalisation and the changes it causes in the geographical education in Bulgaria. The aim of the present study is related to the identification of the main directions of the process of globalisation of education and their impact on the contemporary geographical education in Bulgaria. In order to realise the aim, the methods of comparative analysis and content analysis are applied. To clarify the theoretical premises of globalisation of education we refer to the studies of F. Cornali, S. Tirocchi, M. Astiz, A. Wisemand, D. Baker; O. Stacey, G. De Lazzari, H. Grayson, H. Griffin, E. Jones, A. Taylor, D. Thomas, I. Mullis, M. Martin, Goh, T. Loveless.

Keywords: globalization, globalization of education, geographical education, Bulgarian education.

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Съвременни аспекти на географското образование в България в контекста на глобализацията

Резюме: Актуалността на изследваната тема е свързана със засиления процес на глобализация в началото на XXI век, който засяга всички сфери на живота. Това се отразява не само на провежданите в тях политики, но и води до формирането на нови устойчиви морални ценности. Образователната сфера е една от тези, които пряко отразяват настъпилите промени в обществените нагласи и ги трансформират под формата на образователни цели. По този начин процесите на глобализация оказват косвено влияние върху настоящите и бъдещите поколения на всички страни в света. Обектът на изследването е свързан с процеса на глобализация и промените, които той предизвиква в географското образование в България. Целта на настоящото изследване е свързана с идентифицирането на основните направления на процеса на

глобализация на образованието и тяхното влияние върху съвременното географско образование в България. За реализиране на целта са приложени методите на сравнителния анализ и контент-анализа. За изясняване на теоретичните предпоставки на глобализацията на образованието се позоваваме на изследванията на: B. Singh, S. Chaddha, J. Spring; S. Sellar, B. Lingard, F. Cornali, S. Tirocchi, M. Astiz, A. Wisemand, D. Baker, O. Stacey, G. De Lazzari, H. Grayson, H. Griffin, E. Jones, A. Taylor, D. Thomas, I. Mullis, M. Martin, Goh, T. Loveless.

Ключови думи: глобализация, глобализация на образованието, географско образование, българско образование.

Introduction

The topicality of the researched subject is related to the intensified processes of globalisation of all spheres of economy, culture, education, which are taking place in the beginning of the 21st century. This not only affects the policies pursued in them, but also leads to the formation of new sustainable moral values. The educational sphere is one of those that directly reflects the occurring changes in social attitudes and transforms them in the form of educational goals. In this way, globalisation processes implicitly influence the present and future generations of all countries in the world.

The object of the study is related to globalisation as a process and the changes it causes in geography education in Bulgaria. The aim of the present study is related to the identification of the main directions of the process of globalisation of education and their impact on contemporary geography education in Bulgaria. In order to realise the aim, the methods of comparative analysis and content analysis are applied.

To elucidate the theoretical frameworks of globalisation of education, we refer to the studies of B. Singh, S. Chaddha, J. Spring, S. Sellar, V. Lingard, F. Cornali, S. Tirocchi, M. Astiz, A. Wisemand, D. Baker, O. Stacey, G. De Lazzari, H. Grayson, H. Griffin, E. Jones, A. Taylor, D. Thomas, I. Mullis, M. Martin, Goh, T. Loveless.

Globalization of Education

In the field of education, the process of globalisation has a wide range of impacts on national education policies and manifests itself as the globalisation of education. It can also be defined as the commercialisation, privatisation and capitalisation of education at the international level (*Singh & Chaddha, 2018:144*). The process of globalisation of education can be manifested in the following ways:

- focus on education as a mechanism for economic growth;
- collaborative activities of intergovernmental, governmental and international non-governmental organisations in the field of education;
- the impact of information technology and the global information network;
- international evaluation in education;
- influence of multinational corporations on global and regional education policies (*Spring, 2008:340*).

Thus, the globalisation of the world economy challenges young people to actively participate in the increasing globalisation of education (*Sellar & Lingard, 2014:918*). It shifts the focus away from local and regional educational research and places it at a higher level by directing it towards macro- or meso- level research. This broadens both the spatial scope and the substantive scope of education research and focuses it on a larger number of existing problems.

At the same time, in the modern world, countries are striving to develop a knowledge-based economy and this has a direct effect on education policies and the university and school curricula through which they are implemented. This provides an opportunity to assess the role of education in promoting economic growth by paying increasing attention to learning institutions that form specific practical competencies to develop the potential to facilitate future economic growth. The processes lead to a convergence of existing curricula and their adaptation on specific scientific aspects with the potential to influence economic growth.

Globalizing sectors of the economy that have a technological or scientific basis requiring specific scientific knowledge and skills include computing and mobile technologies, pharmaceuticals and biotechnology, among others. They are particularly important in a globalising world economy and the associated national economies of individual countries.

Countries developing or considering investing in the development of these technologies should be aware of new developments in science and their implications for curricula and programmes as a medium or long-term strategy for successful participation in these sectors. Investing more closely in new educational fields and demonstrating the close link between science and practice help to make education a *mechanism for future economic growth*.

Another strand of the impact of globalization on education relates to the *increasing role of information and communication technologies* (ICTs) and the World Wide Web on science and education. The potential impact of this resource on science and education technology boils down to the rapid sharing of scientific information and ideas widely by universities and educational institutions that provide educational services and resources to schools and educational institutions around the world.

ICT helps to increase the quantity and accessibility of learning resources. They provide opportunities for rapid information sharing and interaction between learners regardless of their location. Their correct and targeted use improves the conditions for the realisation of personalised learning tailored to the needs of the individual learner. The impact of ICTs on the globalisation of education is expected to continue to increase as traditional fact-based science curricula are replaced by more flexible curricula focused on the acquisition of specific skills (*Cornali & Tirocchi, 2012:2062*).

Another important area of globalisation of education is the drive towards unification and validation of students' educational achievements based on the development of large-scale *international assessment* projects. By taking into account the results in the international assessments being conducted, a global trend is emerging to place greater emphasis on standardisation of education in the areas being studied and convergence of curriculum goals across countries (*Astiz et al., 2002:71*). In addition, information is provided to each participating country to compare national educational requirements with those in other European countries. This, in turn, can act as a catalyst for change and convergence with countries to make changes to their education

systems to address weaknesses or deficiencies identified as a result of their participation in international assessments (*Stacey et al., 2018:12*).

Recurrent international student assessment studies include the Grade 4 International Mathematics and Science Study (TIMSS), the Programme for International Student Assessment (PISA) and the Grade 4 Progress in International Reading Literacy Study (PIRLS).

The International Mathematics and Science Study of Grade 4 Students (TIMSS) is supported by the International Association for the Evaluation of Educational Achievement (IEA). TIMSS reports on trends in student achievement and explores differences between national education systems in more than 60 countries to help improve the teaching and learning of mathematics and science.

The focus on learning content in the areas listed and the emphasis on policies and practices make TIMSS a source of rich information through which participating countries can assess the effectiveness of their education practices and national education standards targets in an international context.

In addition to the survey reports, a TIMSS encyclopaedia has been published that presents information on curriculum, educational standards and practices, and teacher training for each participating country (*Mullis et al., 2016*). Its use contributes to the depth of pedagogical research at the national level and to its methodological depth.

The Programme for International Student Assessment (PISA) was developed by the Organisation for Economic Co-operation and Development (OECD) in the 1990s as a periodic international standardised assessment of 15-year-old students. It arose in response to the need to develop indicators to compare the quality of education across countries. It began in 2000 and involved 43 countries. PISA is conducted over three-year periods and the assessment covers three cognitive domains: reading, mathematics and science.

The Progress in International Reading Literacy Study (PIRLS) reports on trends in student achievement and explores the differences between national education systems in participating countries to help improve teaching and learning around the world. PIRLS is implemented by the TIMSS & PIRLS International Study Centre, Boston College, USA, together with the International Association for the Evaluation of Educational Achievement (IEA). PIRLS measures Grade 4 students' abilities to understand the content of a variety of texts using a range of cognitive processes. The study focuses on the two main goals of students' reading in and out of school.

In spite of the discussed directions that drive the globalization of education, there are other factors that counteract this process. These include national educational traditions and different interpretations of centralised curricula based on local culture. This cannot be ignored, as specific features of national psychology influence social educational requirements and reflect on national educational policies.

As one of the negative effects of globalization of education, one can point to the emigration of highly qualified personnel ("brain drain"), which is becoming a dominant pattern of international migration and a major aspect of globalization. According to published data from the 2021 Census, a "brain drain" of over 2 million people is reported based on the previous census. The same process can be observed in a number of countries in Eastern and Southern Europe, which are having difficulty retaining their young, highly qualified staff.

Increased emigration of highly skilled workers and young people can be linked to the Global Competitiveness Index (GCI) and reinforce the drive of young people to emigrate to countries with high GCI values. It is researched by the International Institute for Management Development (IMD), an independent academic institution with Swiss roots and global reach. In calculating the IMD index, countries are analysed and ranked according to their capacity to create and sustain a competitive environment. Four main factors are considered – economic performance, government effectiveness, business effectiveness and infrastructure. In turn, each of the factors listed is divided into 5 categories that highlight each aspect of the areas analysed. The main pillars of competitiveness emerge as – institutional framework, legislative framework, infrastructure and education.

For 2022, the IMD index analyses the economies of 63 countries. The top 5 countries with the highest competitiveness are Denmark (index – 100.00), Switzerland (index – 98.92), Singapore (index – 98.11), Sweden (index – 97.71) and Hong Kong (index – 97.71). Bulgaria ranks 53rd with an index of – 51.36 (*IMD World Competitiveness Booklet, 2022:33*). In the period 2017-2019, the index for our country ranged from 62.32 to 64.9, after which it dropped sharply and retreated from the 48th place.

The reasons are related to the following challenges Bulgaria needs to address:
– Geopolitical turmoil and rising inflation caused by increasing electricity costs;
– Inconsistent energy and climate policies;
– Confrontation between the executive and the judiciary;
– Lack of credible enforcement of anti-corruption measures;
– Limited investment in R&D and innovation (*IMD World Competitiveness Booklet 2022:59*).

For 2022, three trends can be distinguished that are capable of influencing the competitiveness of countries in the long term and the process associated with the "brain drain", as well as affecting educational processes regionally and globally.

The first trend is related to the resolution of acute geopolitical issues that may have regional implications for the continent of Europe and global implications for the whole world. These issues are related to the war between Russia and Ukraine and the subsequent economic restrictions, refugee flows and threats to peace locally and regionally. This can lead to destabilisation of political systems, which in turn are a key element of effective governance.

The second trend concerns the existing regional differences in terms of ignoring possible global risks that would cause serious consequences on a global scale. This includes natural disasters such as floods, earthquakes, droughts, as well as man-made fires, attacks and others.

The third trend is but a manifestation of the new "globalisation", in which governments need to be more adaptive to changing global conditions and in readiness to meet unexpected threats such as a combination of several crises operating simultaneously – health, economic, geopolitical, etc. (*IMD World Competitiveness Booklet, 2022:26*).

The negative effects of the process of globalisation of education give rise to the need for counteraction by society through the development of strategies and workable mechanisms to integrate and coordinate efforts to curb and stop the brain drain. In this respect, work can be done to improve the quality of life in order to attract and retain an educated workforce; to promote policies and instruments to develop local entrepreneurship, stimulate self-employment

and implement alternative business models; and to enhance the role of universities and vocational education, which are linked to the "knowledge economy".

Globalization of Education in Bulgaria

All of these aspects of the globalisation of education have their impact on education in Bulgaria. Those educational directions are stimulated which can be a working mechanism and guarantee for future economic growth. In school education, emphasis is placed on strengthening the practical orientation, focusing on dual training. The development of students' media literacy and the accelerated acquisition of knowledge and skills for working in the digital society are increasingly promoted.

In 2020 in Bulgaria the establishment of school STEM (Science – Technology – Engineering – Mathematics) centres for learning through the methods of the respective scientific fields is initiated. They are a set of purpose-built and equipped learning spaces focusing on the learning and application of competences in science, technology, engineering, and mathematics (*Strategicheska ramka…, 2021-2030:9*). It is expected to continue to stimulate activities to improve the educational environment through the establishment of school and after-school centres with STEM environments, which involves changing the concept of the organisation of the educational environment, learning content, teaching, and management of school processes, through the application of experimental and research activities.

In addition to building STEM environments in Europe and Bulgaria, the development of STEM (Science – Technology – Engineering – Art – Mathematics) environments in classroom and extracurricular settings that bring together activities related to science, technology, engineering, art and mathematics is also stimulated.

Over the past three years, the Ministry of Education has been trying to increase interest in teaching courses in universities and those in the natural sciences through financial incentives for students. There has also been a sustained increase in interest in IT-related professions over time due to their competitiveness in the labour market and good financial backing.

Increasing attention is being paid to the results of international assessments and ways are being sought to improve student achievement against European and global standards. Bulgaria's participation in TIMSS 2023 is coordinated by the Centre for Assessment in Pre-School and School Education at the Ministry of Education and Science. The country will participate in the 4th grade survey for the third time in a row, together with nearly 60 countries from around the world. The TIMSS 2023 main survey is set to be conducted with around 5,000 fourth graders from over 150 schools in the country.

Bulgaria also participates in the international survey TALIS of the Organisation for Economic Co-operation and Development (OECD), which is the first survey worldwide with the main object of study – teachers and their working conditions. Participation in the survey enables teachers and school principals to contribute to the study of the learning environment and to the development of educational strategies by collecting data. Their analysis is used to develop international indicators of teacher and teaching practices to assist countries in developing policies to create conditions for effective learning.

Bulgaria participated in all three phases of its implementation in 2008, 2013 and 2018. TALIS creates a basis for comparative analyses across countries, to identify similar challenges

and different approaches to overcome them and to reveal trends in education policies around the world (OECD, 2020). One of the findings of the study in the last year is related to the low prestige of the teaching profession, which hinders the participation of young, quality and motivating staff in the education system. This applies mainly to Bulgaria, but can also be reported as a trend in a number of European countries.

Bulgaria participates in the PIRLS survey for the fifth time, together with about 60 countries from around the world. Given the situation with the COVID-19 pandemic, the pilot study has been postponed and will take place in September-October 2020 with about 500 fifth graders in 11 of the pre-selected schools.

Transformation of geographical education in the context of globalization

Educational globalisation changes in Bulgaria have a complex impact on all educational fields, including *geographical education*. It projects the foundations of geographical science in the sphere of school and university education and has the advantage of reflecting natural and socio-economic processes and phenomena on a global and regional scale. The holistic, horological and chronological nature of geographical knowledge underpins its close connection with contemporary geo-global processes, which determine the main emphases of the curriculum content.

In addition to curricular content, other elements of the geography education system in secondary and tertiary schools are also changing in the context of globalisation processes. These are regulated and concern the implementation of the competency-based approach with an emphasis on the applied side of geography education and its practical application through the key competences.

The transformation of the elements of the geography learning process in relation to the methods, forms and didactic tools applied is also reported. The preferred methods are interactive and exploratory within the framework of the profiled training. The forms are transformed according to the available conditions in the direction of their individualisation, and the didactic tools are increasingly digitalised and the use of information and communication technologies is increasing.

As a consequence of the analysed directions of manifestation of the process of globalization of education and its impact on geography education, certain characteristic features of geography education can be identified (*Figure 1*). These define its contemporary profile and significantly distinguish it from its characteristics in past periods and in the context of globalisation

The authors do not claim to be completely exhaustive, but they hope that the outlined characteristics will highlight certain features of geography education that are relatively new and should take into account in the process of its implementation in school and university geography education.

Increasing *digitalization* in all areas of life is a perfectly natural process that also affects geography education. Its advantages and disadvantages have confronted teachers, lecturers, pupils and students in a pandemic environment over the last two years. This has led to certain issues to be addressed – the need to improve the competencies of geography teachers to work in a digital environment; to increase the quality of digital geography resources and to provide

technical tools for their use; to find mechanisms to obtain adequate feedback from students on the extent of their autonomy in completing set tasks, etc.

Mobility as a process is typical of modern society in the context of globalisation. It facilitates the removal of certain borders and the bridging of distances. In the field of geography education, it contributes to the acquisition of experience based on the expansion of contacts in the geographical community at national and international level. Good shared European and global educational practices enrich the arsenal of didactic competences of geography teachers and make them more adaptable and flexible.

Changes in geography education today are occurring at a much greater rate than in the twentieth century. This is caused by the increased dynamics of processes in the modern world and their inevitable impact on education. Relevance as a requirement for geographic educational content causes conditions for rapidly occurring changes both in terms of educational content and in pedagogical technologies and didactic tools. This poses a certain challenge for geography teachers and university lecturers to be aware of and apply current trends in contemporary geography education.

The *process of unification* of geographic education is aimed at unification and standardization of educational objectives, of didactic technologies recommended for use in view of their effectiveness, of national criteria for evaluation. The materials and documents of the International Geographical Union (IGU), the International Geography Olympiad, the Association of Geographical Societies in Europe (EUGEO), the EU guidelines for educational activities in the European Education Area, etc. serve as a common framework.

Contemporary geography education is influenced by the expanding territorial scope of contact of teachers, students and lecturers and the need to improve their language competences. The possibility of realising *multilingual communication* improves the conditions for the exchange of good educational practices in the field of geography education and contributes to the inclusion in European and global educational values.

Interactivity in school and university geography education has proven to be more effective than traditional methods and forms. In the context of globalisation of geography education, it is particularly necessary to increase young people's motivation to actively participate in the learning process and its orientation towards practice.

Conclusion

Globalization is inextricably linked to the contemporary development of society today. It will also affect the specificity of future generations as they receive their education today, which is influenced by globalisation processes, and will realise their contribution to societal development in the near future. The globalization of education is manifested in certain directions that are largely changing the educational environment, educational resources and spiritual values.

The globalisation of education affects the educational system of Bulgaria and all countries in the world and attempts certain transformations in terms of their unification and standardization and neglect of part of the national educational traditions.

Geographical education is an integral part of modern education and is influenced by globalisation and geo-global issues. The attempt made to identify the characteristics of

geography education in the context of globalisation can lay the foundation for a discussion on these issues.

Corroboration

References:

Astiz, M., Wisemand, A., & Baker, D. (2002). Slouching Towards Decentralization: Consequences of Globalization for Curricular Control in National Education systems. *Comparative Education Review*, *46(1)*, 66-88.

Cornali, F., & Tirocchi, S. (2012). Globalization, Education, Information and Communication Technologies: What relationships and reciprocal influences? *Procedia-Social and Behavioral Sciences*, *47*, 2060-2069.

IMD World Competitiveness Booklet (2022). Lausanne. Retrieved September 7, 2022, from https://imd.cld.bz/IMD-World-Competitiveness-Booklet-2022

Mullis, I., Martin, M., Goh, & Loveless, T. (Eds.) (2016). *20 Years of TIMSS International Trends in Mathematics and Science Achievement, Curriculum, and Instruction*. Boston College & IEA.

OECD (2020). TALIS 2018 Results (Vol. II): Teachers and School Leaders as Valued Professionals, Paris: OECD Publishing. DOI: 10.1787/4eaa775a-en

Sellar, S., & Lingard, B. (2014). The OECD and the expansion of PISA: New Global Modes of Governance in Education. *British Educational Research Journal*, *40, 6*, 917-936.

Singh, B., & Chaddha S. (2018). Globalization and Education. *International Journal of Advanced Educational Research*, *3(1)*, 144-146.

Spring, J. (2008). Research on Globalization and Education. *Review of Educational Research*, *78*(2), 330-363.

Stacey, O., Lazzari, G. De, Grayson, H., Griffin, H., Jones, E., Taylor, A., & Thomas, D. (2018). The Globalization of Science Curricula. *Research for Education*, *3*, 5-21. IEA.

Strategicheska ramka za razvitie na obrazovanieto, obuchenieto i ucheneto v Republika Balgariya (2021-2030). Retrieved September 1, 2022, from https://www.navet.government.bg/bg/media/strategicheskaramka_obrobuuchene_1103 21-1.pdf (in Bulgarian).
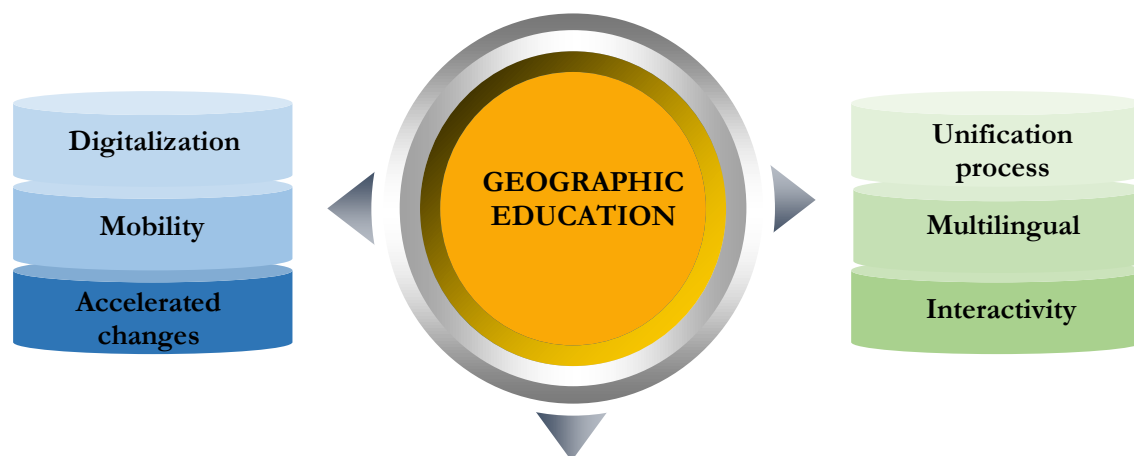
Figure 1. Features of geographical education in the context of globalisation

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Femicide and child marriages in Turkey

Abstract: In Turkey, each day women killed because of the domestic violence and also families forced their children to marry before 18s. The legal age of marriage is 18, but also children can marry at the age of 17 and 16 with the permission of family and courts. (Unicef Türkiye). In addition, in Turkey both femicide and early child marriages are connected to each other. Both of them are results of the social biases, which are prejudges, stereotype, and the gender discrimination or the gender inequality. Because of the illiteracy, economic difficulties, education system, and political or government policies, Turkey fights with gender discrimination and early child marriages. The purpose of the study is to analyse the femicide and child marriage cases in Turkey by using the statistical sources to show that femicide and child marriages are one of the big problems of Turkey. The tasks of the study are to finish with the reasons of femicide and child marriages, and offer some solutions to those problems.

Keywords: femicide, child, marriages, Turkey, biases, stereotypes, prejudges, education.

Introduction

Nature-nurture debate is based on political and academic discourses, and it does not have relation with man-made discourses, social-cultural ideologies (*Burr, 2002:31*). Because of this debate, unfortunately, in this developed century, sex or sexuality is one of the big problems around the world. Still, most of the government policies, academicians, books, articles, and etc. discuss the differences between men and women and relate it with the idea of nature-nurture debate. Even, they talk about the gender discrimination and early child marriages. Both of those problems are the results of the ideological ideas of society, in short, the constructed ideas of people. According to Ann Oakley (1972) sex as a word denotes the biological differences such as male and female, but on the other side gender is related with society such as masculine and feminine. Because of the cultural ideologies or gender inequalities, society and family's pressure early marriages especially among girls (*Dağ et al., 2021:549*).

In Turkey, each day women killed because of the domestic violence and also families forced their children to marry before 18s. The legal age of marriage is 18, but also children can marry at the age of 17 and 16 with the permission of family and courts. (Unicef Türkiye). In addition, in Turkey both femicide and early child marriages are connected to each other. Both of them are results of the social biases, which are prejudges, stereotype, and the gender discrimination or the gender inequality. According to Unicef Türkiye "gender inequality that reinforces stereotypical roles for girls and curtails their education, compromises their health, and exposes them to the risk of violence and poverty." Because of the illiteracy, economic difficulties, education system, and political or government policies Turkey fight with gender discrimination and early child marriages. Especially, the killing of women and girls' marriages before 18s. Femicide is known as a kind of terror against female such as sexual, physical and verbal. At the

end of this terrorism female are murdered by male that we call femicide (*Kouta et al., 2017:1*) In other words, femicide is a kind of "violence against women" (*Etherington et al., 2015:4*) and the causes of femicide are related with "gender inequality, gender expectations, and systemic gender-based discrimination." (*Etherington et al., 2015:4*) Another reason of femicide is with the treating the "patriarchal order" (*Iranzo, 2015:1*) such as Turkey is controlled by patriarchal order.

Furthermore, femicide is associated with gender discrimination and at the end of the gender inequality women and girls killed by others. As Helgeson (2017) mentions sex and gender are different terms and sex refers biological categories, such as genes, chromosomes, and hormones. On the other side, gender refers to the social categories (*Helgeson, 2017:30*). In addition, as Helgeson mentions (2017) gender role is a term that based on "society's influence on the biologically based categories of female and male" (*Helgeson, 2017:31*). It means that gender role is related with a set of norms and expectations of society (*Helgeson, 2017:30*). To rephrase it, gender roles define being male and female (*Helgeson, 2017:31*). Such as women are more emotional and men are strong than women (*Helgeson, 2017:31*). Because of the gender roles masculine and feminine have different features such as traits, behaviours, and interest, which are assigned by society.

The purpose of the study is to analyse the femicide and child marriage cases in Turkey by using the statistical sources to show that femicide and child marriages are one of the big problems of Turkey. The tasks of the study are to finish with the reasons of femicide and child marriages, and offer some solutions to those problems.

Literature Review

As Burr (1998) mentions "Gender is the social significance of sex" (*Burr, 1998:11*). It is the expectations of society for men and women that we call them masculinity and femininity (*Burr, 1998:11*). For example, according to Burr (1998) masculinity is the way of being a man and femininity is the way of being a woman that the expected behaviours and traits of society and culture (*Burr, 1998:146-156*) As Burr summaries (1998) masculinity and femininity are created by people who share the culture because of this they are not stable. They are changeable (*Burr, 1998:12-13*).

Moreover, gender differentiation, which is based on the contradiction of between male and female, and it does not have any relation with biology (*Burr, 1998*) Sex differentiation leads or supports the sex discrimination between male and female. Especially against women (*Burr, 1998:12*). It can be suggested that the reason of gender differences and gender discrimination is patriarchy, which is based on "rule by the father" (*Burr, 1998:14*). In other words, today the term refers "power inequalities between women and men" (*Burr, 2002:14*). From the different perspectives, according to Walby patriarchy is a kind of system and practices of culture that man has power to control, harass and abuse women (*Walby, 1990:20*).

Furthermore, discrimination is "the consequence of prejudices and make them powerless." (*Agcihan & Gokce, 2018:258*), because the prejudges means one who has gender schematic. Gender Schematic is "about what to wear, how to behave, what career to pursue, what leisure interests to pursue, and what emotions to present to others" (Helgeson, 2012: 169) Thus, social biases which are discrimination, stereotype and prejudges are the reasons of femicide and child marriages.

Discrimination, Stereotype and Prejudges

Dovidio, Hewstone, Glick, and Esses (2010) describe three forms of social bias, which are prejudice, stereotypes, and discriminations as:

a) prejudice, an attitude reflecting an overall evaluation of a group;

b) stereotypes, associations, and attributions of specific characteristics to a group;

c) discrimination, biased behaviour toward, and treatment of, a group or its members (*Dovidio et al., 2010:5*).

In 1949, Secretary-General of the United Nations defined discrimination as unequal and adverse treatment leading to inequality between members of the privileged category and non-members, by denying the rights or social advantages of members of a particular social class, or by imposing special conditions on them; or by providing a variety of advantages to members of another category (*The main types and causes of discrimination, 1949*).

In other words, "discrimination is an unequal treatment based on the application of an illegitimate criterion" (*Fassin, 2002:403-423*). In addition, as Ceylan Matbassı mentions low-income individuals have higher discrimination than high-income individuals (*2019:15*).

From the different perspective, according to APA Whereeas References:

* prejudices are unfavourable affective reactions to or evaluations of groups and their members,

* stereotypes are generalised beliefs about groups and their members,

* interpersonal discrimination is differential treatment by individuals toward some groups and their members relative to other groups and their members,

* institutional discrimination involves policies and contexts that create, enact, reify, and maintain inequality.

On the other hand, prejudice, stereotypes, and discrimination are pointed different stigmatized groups which are defined by their age, language, gender, religion, ethnicity, race, sexual orientation, and etc. (APA Whereeas References) In short, gender discrimination is one of the big problems around the world and in Turkey as well. One of the results of gender inequalities or discrimination is Early Child Marriages.

Early Child Marriages

Early child marriages defined as any kind of formal or informal marriage between children before the age of 18 (*Unicef, 2021*). According to Tahera Ahmed (2015) child marriage common for girls, but concerns to both girls and boys (*Ahmed, 2015:8*). As Polat and Reva (2019) point out that child brides face with different risks such as problems in pregnancy and childbirth, constricting HIV/AIDS and suffering domestic violence because, physically and emotionally are not ready to become wives and mothers. In addition, according to Polat and Reva (2019) the reasons of the child brides are connected with poverty, education, and economy (*Polat, & Reva, 2019:339*).

Turkey is one of the countries that face with child marriages especially after education reforms in 2012. The reason is that compulsory education is separated into three four-year

periods, and they allow the home schooling. This home-schooling law may be increasing the child brides (*Child Marriage in Tukey, 2014:3*).

Unicef Turkey states that because of the low socio-economic position, girls in Turkey force to marry before 18 years old and fit themselves into the traditional gender roles. Also, as Unfpa Türkiye states in their report "1 out of every 3 women who got married before the age of 18 became a mother as a child" (*I will fight early marriages with all my power, 2022*). Accordingly, 19-year-old Helin is trying to save girls from the forced marriage (*I will fight early marriages with all my power, 2022*).

Another report, which is dated back 5 March 2021 indicates that children who married before 18 are mother and almost half of forced marriage women faced with physical violence. (*I will fight early marriages with all my power, 2022*) The statistic that took from 2008 till 2020, summarised by Zeynep Dierks (2022) and she mentioned that "child marriage in case of girls totalled around 13 thousand while in case boys the number was way lower, measuring at 726 cases. At the age group of 16 to 17 years old, 0.73 percent of girls and 0.03% of boys got married in 2020 in Turkey." As the Duvar web page shows that in 2020, 13,740 children married and 95 percent of those marriages belonged to the girls (2021). The Turkish Statistical Institute (2022) 2021 results illustrate that under 18 age females married more than male.

Diagram 1 shows the first marriages under age of 18. Females (24.2%) married under age of 18 more than males (4.4%) and diagram 2 illustrate that percentages of arranged marriage without the opinion of male was 8.6 and female was 12.5.

Table 1 (Turkstat report) describes the range of the early marriages between male and female and the provinces. Between the years of 2011-2021 472,304 males had first marriage between 16-19 and female percentage was 462,317. It means that female had more first marriage than male.

Table 2 indicates that the maximum number of people who married between 16-19 and the name of the provinces in 2021. Between the ages of 16-19 Gaziantep was the first place who had first marriages with the number of 3,612, and Diyarbakır follows with the number of 1918. Those numbers belong to female marriages between 16-19 ages. On the other side, male numbers were 242 at Gaziantep and 229 at Diyarbakır.

According to the report of IMDAT (Violence Prevention and Rehabilitation Association) Turkey was the first country in Europe about the child marriages with the percentage of 2%. (*Cumhuriyet Newspaper, 2021*). Also, the Cumhuriyet Newspaper mentions the Turkish Statistics Institute report and according to this report (2020) the total marriage number is 487,270 and the girl child marriage number was 13,014. The girl child marriage percentage was 2.7% and boy child marriage percentage was 0.1% (*Cumhuriyet Newspaper, 2021*).

Moreover, NTV News (2021) remarks the ideas of Gökhan Yıldırım's thematic analysis of 6 big research and says that it does not have any changes of child married in Turkey in last 10 years. Also, the NTV news point out that still 15 out of 100 children have forced early marriage. Even, 9 out of 10 children who married before 18 said that "they want to marry after 20 (*NTV News, 2021*).

Those statistics and results show that in Turkey most of the girl children married before 18 ages and because of this they faced to gender discrimination.

Femicide

Besides of child marriages, femicide is another big problem of Turkey. Still in this technological age women are not free and they are killed by men in Turkey.

According to the We Will Stop Femicide (Kadın Cinayetlerini Durduracağız) Platform in 2021, 280 women killed. The figure 1 shows the number of killed women according to the province.

Furthermore, the figure 1 displays the Online Monument Counter. He website displays the number (278) and the names of killed women because of the domestic violence.

According to the We Will Stop Femicide Platform (Kadın Cinayetlerini Durduracağız Platformu) in May 2022, 35 women killed by men and 16 women's death found doubtful (2022). On the other hand, again the same platform indicates that in 2021 280 women killed by men and in the same year 217 women's death found doubtful (2022).

Moreover, the recent report of Stockholm Center for Freedom reported the report of Duvar News and says that "a total of 25 women were murdered in Turkey in March, while 19 women died under suspicious circumstances" (2022).

Literacy Level of Turkey

Table 3 the literacy level of Turkey statistic presents that in 2019 with the 99.08 percentage males' literacy level is higher than female.

On the other hand, UNESCO (Institute for Statistics) Turkey mentions the illiterate populations and literacy rate of Turkey.

Illiterate Population and Literacy Rate tables (7-8) show us the average of the families' education level. Uneducated people who are 65 and older may allow forced marriage and as can be seen they are uneducated people.

On the other side, diagram 3 between the years 2020 and 2021 male and female have the close enrolment level of education. As diagram 4 presents the main difference between male and female, who completed at least one education level. In 2020 female percentage is 87.7 and male percentage is 98.1.

Table 6, TurkStat, National Education Statistics Database presents the peoples' education level that based on sex from 2008 till 2021. The statistics illustrates that illiterate female population is 1,593,893 and male percentage was 268,639. In addition, without a diploma literate female percentage was 4 on 305,606 and male percentage was 3 on 2,246,969. On the other side TurkStat statistic has an interesting result between female and male about schools and educational institutions. For example, below the table summarises the differences between female and male about educational level. Also, as given in the table 6 males are more educated than female in 2021.

Employment Rate

From the different perspective employment rate is another important issue that effects gender discrimination and early child marriages. As shown in diagram 5 female unemployment rate are higher than male. On the other side, male employment rate is higher than female.

Discussion and Reasons of Chid Marriages and Femicide

The Guardian Newspaper (*McKernan, 2020*) points out the government ideas about women that "women are not equal to men, and those without children are deficient" and "rather than physically attack women in public wearing shorts, they should verbally harass them instead" (2020) that is the general ides of government policy.

Another way to say it, in Turkey is connected with the discourses of government policy that is "women and men could not be treated equally. It is against nature," accusing feminists of "rejecting motherhood" (Cariou, 2021).

The rejection of Istanbul Convention (*Interview…, 2022*) is another reason for femicide and the early child marriages. According to government policy the reason of the rejection of Istanbul Convention is against the Turkish family structure/patriarchal structure of Turkey. As they mention "Istanbul Convention 'threatens family values' (Cariou, 2021).

Education and Literacy tables (9-10) show us the average of the families' education level. Uneducated people who are 65 and older may allow forced marriage and as can be seen they are uneducated people.

According to Gül Akbal (2021) the reasons of femicide are gender, patriarchal structures, violence, fear and oppression, politics, and authoritarianism. The other is the economic situations of people, who force children to face early child marriage (*Unicef Türkiye*). Traditions and values are another reason of girl brides. They increase the poverty and lack of education can be seen in the analysis part.

COVID-19 pandemic is another reason of femicide, because women had to stay in the abusive situations. They did not have any chance to take help or go outside for help. Also, because of the pandemic women *subject to online and offline abuse, harassment, backlash, and threats (Unwomen).*

According to Burcu Karakaş (2019) "nationalist and Islamist discourse becomes more dominant and male violence is seen as legitimate, women are becoming easier targets for abuse and violence." In other words, other reasons are listed by *Caroline Warrick (2020) as:*

1) gender-based and domestic homicides are often referred to as "honor killings";
2) femicide in Turkey is on the rise;
3) legal framework has been laid to protect women;
4) female empowerment has led to women in Turkey achieving economic independence;
5) the Turkish government practically encourages gender-based violence.

Finally, as Daniel Bellut and Burcu Karakaş (2019) mention the ignorance of child marriages and femicide are one of the big problems of Turkey.

Conclusion

All the data that presented show the roles of the women the political and social reforms about women have effected by the dominant ideology of patriarchal family. the because of the patriarchal family (*Gökçe Demir et al., 2013:150*). As Tuba Kabasakal (2018) mentions violence against women in Turkey is connected with the "culture, societal values and religion" discourses (*Kabasakal, 2018:71*). In short as mentioned before the femicide and early child marriages are consequences of the social biases, which are prejudges, stereotype, and the gender inequality. In

addition, still in this Turkey fight with femicide and child marriages, because of the of the illiteracy, economic difficulties, education system, and political or government policies.

Furthermore, the analysis shows that early child marriages and femicide have close relation with the education level of people because "as educational status of people increased, the proportion of marriages with people's own decision increased and the proportion of arranged marriages decreased" (*Turkstat, 2022*). It means that uneducated has potentiality to support femicide and early child marriages.

So, as Cumhuriyet Newspaper (2021) Newspaper points out that in general society does not have enough knowledge and awareness about child marriage, and because of this they do not know where they can apply when they face with child marriage. (*Cumhuriyet Newspaper, 2021*).

Consequently, as Ecevit mentions "Gender is not stable, it is fiction and changeable". (*Ecevit, 2021:11*).

Solutions

Solutions of the femicide and child marriages could be listed as follow:

- Law Regulations,
- Changes of discourses and government policies,
- Education levels,
- To search and apply the world strategies and apply them,
- Literacy Levels,
- Improve the traditional and cultural values,
- To enhance awareness levels.

References:

Agcihan, E., & Gokce, A.T. (2018). Analyzing the Types of Discrimination in Turkish for Foreigners Books. *Universal Journal of Educational Research*, *6*(2), 257-264. DOI: 10.13189/ujer.2018.060207

Ahmed, T. (2015). Child Marriage: A Discussion Paper. *Bangladesh Journal of Bioethics*, *6*(2), 8-14.

Akbal, G. (2021). *Femicides in Turkey: Understanding Femicides through the Social, Political, and Gendered Context* (Dissertation). Retrieved July 10, 2022, from http://urn.kb.se/resolve?urn=urn:nbn:se:liu:diva-178714

APA Whereeas References. *APA Resolution on Prejudice, Stereotypes, and Discrimination.* Retrieved June 8, 2022, from https://www.apa.org/about/policy/prejudice.pdf

Bellut, D., & Karakas, B. (2019, December 9). Femicides in Turkey: A problem that is being ignored. Retrieved July 2, 2022, from https://www.dw.com/en/femicides-in-turkey-a-problem-that-is-being-ignored/a-51587652

Burr, V. (1998). *Gender and Social Psychology. Psychology Focus*. Routledge: London and New York.

Cariou, L. (2021). Gender-Based Violence in Turkey on The Rise: The Government Is to Blame. *Equal Rights, Politics & Foreign Affairs*. Retrieved July 20, 2022, from https://impakter.com/gender-based-violence-in-turkey-on-the-rise-the-government-is-to-

blame/

Child Marriage (2021). Unicef for every child. Retrieved June 12, 2022, from https://www.unicef.org/protection/child-marriage

Child Marriage (2021). Unicef Turkey for every child. Retrieved August 1, 2022, from https://www.unicef.org/turkiye/en/child-marriage

Child Marriage in Tukey (Overview) (2014). United nations Population Fund (UNFPA). Retrieved August 5, 2022, from https://eeca.unfpa.org/sites/default/files/pub-pdf/unfpa%20turkey%20overview.pdf

Cumhuriyet Newspaper. (2021, April 30). Türkiye çocuk yaşta evliliklerde Avrupa birincisi. Retrieved August 3, 2022, from https://www.cumhuriyet.com.tr/haber/turkiye-cocuk-yasta-evliliklerde-avrupa-birincisi-1832341 (in Turkish)

Dağ, H., Yetim, A., Ketenci, A.Ö., & Hançerli, T.S. (2021). A Child Abuse: Marriage at childhood age. *Turk Arch Pediatr*, *56*(6), 548-552.

Demir, A., G., Bulucu, D., G., & Özcan, A. (2013). Men's View Towards Violence Against Women. *Balikesir Sağlık Bilimleri Dergisi*, *2*, 3.

Dierks, Z. (2022, February 7). Number of registered child marriages in Turkey 2008-2020. Retrieved May 28, 2022, from https://www.statista.com/statistics/1288377/number-of-registered-child-marriages-in-turkey

Dovidio, J.F., Hewstone, M., Glick, P., & Esses, V.M. (2010) Prejudice, Stereotyping and Discrimination: Theoretical and Empirical Overview. *The SAGE Handbook of Prejudice, Stereotyping and Discrimination*, 3-28. DOI: 10.4135/9781446200919.N1.

DuvaR.english (2021, April 23). More than 13,00 children married off in turkey in 2020. Retrieved July 10, 2022, from https://www.duvarenglish.com/more-than-13000-children-married-off-in-turkey-in-2020-news-57210

Education, Culture, Sport and Tourism (2022). Turkish Statistical Institute. Retrieved June 1, 2022, from https://data.tuik.gov.tr/Kategori/GetKategori?p=Education,-Culture,-Sport-and-Tourism-105

Ecevit, Y. (2021). *Toplumsal Cinsiyet Eşitliğinin Temel Kavramları. Eğitim Materyali.* Toplumsal Cinsiyet Eşitliğinin İzlenemsi Projesi.

Etherington, N., Baker, L., Pietsche, N., Straatman, A.L., Ansems, A., Barreto, E., & Campbell, M. (2015). Femicide. *Centre for Research & Education on Violence Against Women & Children. Learning Network*, *14*, 1-8. Retrieved July 28, 2022, from https://www.researchgate.net/publication/280310173_Femicide

Fassin, D. (2002). L'invention Françaisede La Discrimination. *Revue Françaisede Science Politique*, *4*(52), 403-423. (in French)

Helgeson, S.V. (2017) *Psychology of Gender*. 5th Edition. Routledge: New York and London.

I will fight early marriages with all my power (2022, January 14). UNFPA Türkiye. Retrieved June 12, 2022, from https://turkiye.unfpa.org/en/news/i-will-fight-early-marriages-all-my-power

Interview: How Turkey's Failure to Protect Women Can Cost Them Their Lives: Authorities Need To Act To Prevent Femicides (2022, May 26). Retrieved May 28, 2022, from https://www.hrw.org/news/2022/05/26/interview-how-turkeys-failure-protect-women-can-cost-them-their-lives

Kabasakal, T. (2018) *Violence Against Women in Turkey: An Analysis of Barriers to the Effective Implementation of International Commitments*. Master Thesis. Faculty of Law. Lund University. Retrieved July 18, 2022, from https://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=8955271&fileOId=8955273

Karakaş, B. (2019, December 18). Femicide in Turkey: What's lacking is political will. Retrieved July 3, 2022, from https://www.mei.edu/publications/femicide-turkey-whats-lacking-political-will

Institute for Statistics (UNESCO). Education and Literacy. Retrieved August 8, 2022, from http://uis.unesco.org/en/country/tr

Iranzo, J.M. (2015*) 'Reflections on femicide and violence against women'. Working paper on femicide (unpublished)*. Universidad de Zaragoza: GESES.

Kouta, C., Rousou, E., Freysteinsdóttir, F.J., Boira, S., & Naudi, M. (2017). Gender and Socio-Cultural Perspectives through Femicide Case Studied. *Journal of Community Medicine & Health Care*, *2*(2), 1013.

Labour Force Statistics (2022, August 10). Turkish Statistical Institute. Retrieved August 11, 2022, from https://data.tuik.gov.tr/Bulten/Index?p=Labour-Force-Statistics-June-2022-45651&dil=2

Matbassı, C. (2019). *The Perception of Discrimination*. İstanbul.

McKernan, B. (2020, July 23). The Guardian. Murder in Turkey sparks outrage over rising violence against women. Retrieved July 8, 2022, from https://www.theguardian.com/world/2020/jul/23/turkey-outrage-rising-violence-against-women

NTV Haber (2021, March 5). Türkiye'de çocuk gelin raporu: 100 çocuktan 15'i çocuk yaşta evlendirildi. Retrieved June 15, 2022, from https://www.ntv.com.tr/turkiye/turkiyede-cocuk-gelin-raporu-100-cocuktan-15i-cocuk-yasta-evlendirildi,uVkBex8yxUuICLLSfLgh8A (in Turkish)

O'Neill, A., (2022, February 16). Literacy Rate in Turkey 2019. Retrieved June 15, 2022, from https://www.statista.com/statistics/575187/literacy-rate-in-turkey/#professional

Oakley, A. (1972) *Sex, Gender and Society*. Gower/Maurice Temple Smith, New Society Series. Editor Paul Barker.

Polat, O., & Reva, Z., (2019). Forced marriages as human rights violation. *International Journal of Social Sciences and Education Research*, *1*(5), 339.

Stockholm Center for Freedom. (2022). 25 women in Turkey victims of femicide in March. Retrieved August 8, 2022, from https://stockholmcf.org/25-women-in-turkey-victims-of-femicide-in-march/

Şiddeten Ölen Kadınlar İçin Diğital Anıt (The Monument Counter) (2022). Retrieved August 18, 2022, from http://anitsayac.com/ (in Turkish)

The Last 25 years of child marriages in Turkey (2021, March 5). UNFPA Türkiye. Retrieved June 12, 2022, from https://turkiye.unfpa.org/en/news/last-25-years-child-marriages-turkey

The main types and causes of discrimination (Memorandum submitted by the Secretary-General) (1945). United Nations Digital Library. Retrieved July 10, 2022, from

https://digitallibrary.un.org/record/1638125/files/E_CN-4_Sub-2_40_Rev-1-EN.pdf

Toplumsal Cinsiyet İstatistikleri: Gender Statistics 2021 (2022). Türkiye Statistik Kurumu. Turkish Statistical Institute. Retrieved July 10, 2022, from https://www.tuik.gov.tr/media/announcements/toplumsal_cinsiyet_istatistikleri_2021.pdf

Türkiye Family Structure Survey, 2021 (2022, April 1). Turkish Statistical Institute. Retrieved June 6, 2022, from https://data.tuik.gov.tr/Bulten/Index?p=Turkiye-Family-Structure-Survey-2021-45813&dil=2

Gender-Based Violence: Women and girls at risk (2022). Unwomen. Retrieved July 19, 2022, from https://www.unwomen.org/en/hq-complex-page/covid-19-rebuilding-for-resilience/gender-based-violence?gclid=Cj0KCQjwidSWBhDdARIsAIoTVb0tjibUHAjmrX8pdmz_9lwtHPqoZjAGwiwFLUNXo2wwmJkawaVlRU8aAjplEALw_wcB

Walby, S. (1990) *Theorizing Patriarchy,* Oxford: Blackwell.

Warrick, C. (2020, September 3). 5 Facts about Femicide in Turkey. Retrieved July 10, 2022, from https://borgenproject.org/femicide-in-turkey/

We Will Stop Femicide Platform (Kadın Cinayetlerini Durduracağız Platformu) (2021). Kadın Cinayetlerini Durduracağız Platformu 2021 Yıllık Veri Raporu. Retrieved July 10, 2022, from https://kadincinayetlerinidurduracagiz.net/veriler/3003/kadin-cinayetlerini-durduracagiz-platformu-2021-yillik-veri-raporu

We Will Stop Femicide Platform (Kadın Cinayetlerini Durduracağız Platformu) (2022). Kadın Cinayetlerini Durduracağız Platformu 2021 Yıllık Veri Raporu. Retrieved August 10, 2022, from https://kadincinayetlerinidurduracagiz.net/veriler/3021/kadin-cinayetlerini-durduracagiz-platformu-mayis-2022-raporu

Women in Statistics, 2021 (2022, March 4). Turkish Statistical Institute. Retrieved June 15, 2022, from https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Kadin-2021-45635&dil=2#:~:text=When%20the%20proportion%20of%20those,%25%20and%2098.1%25%20in%202020

Youth in Statistics, 2021 (2022). Turkish Statistical Institute. Retrieved July 1, 2022, from https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Genclik-2021-45634

Appendix

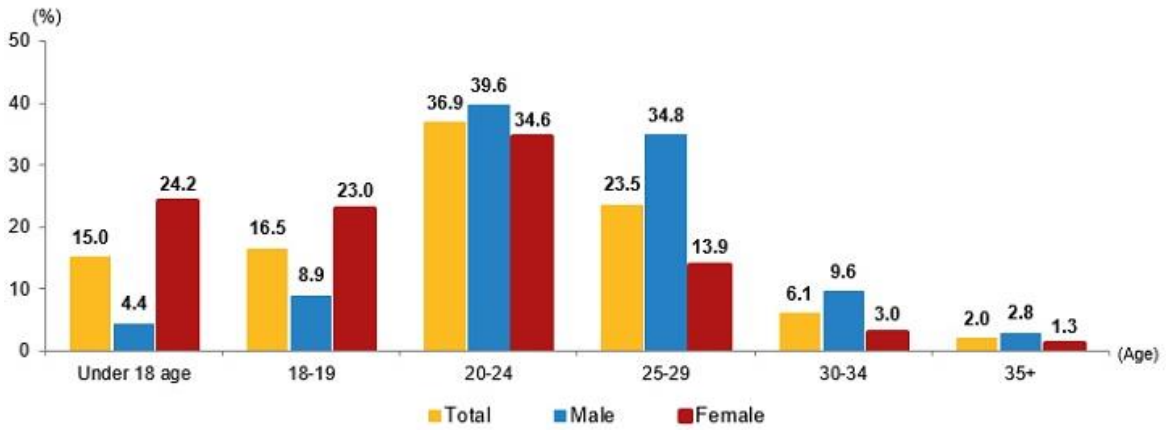Diagram 1. Age at first marriage by sex, 2021 (*Türkiye Family Structure Survey…, 2022*)

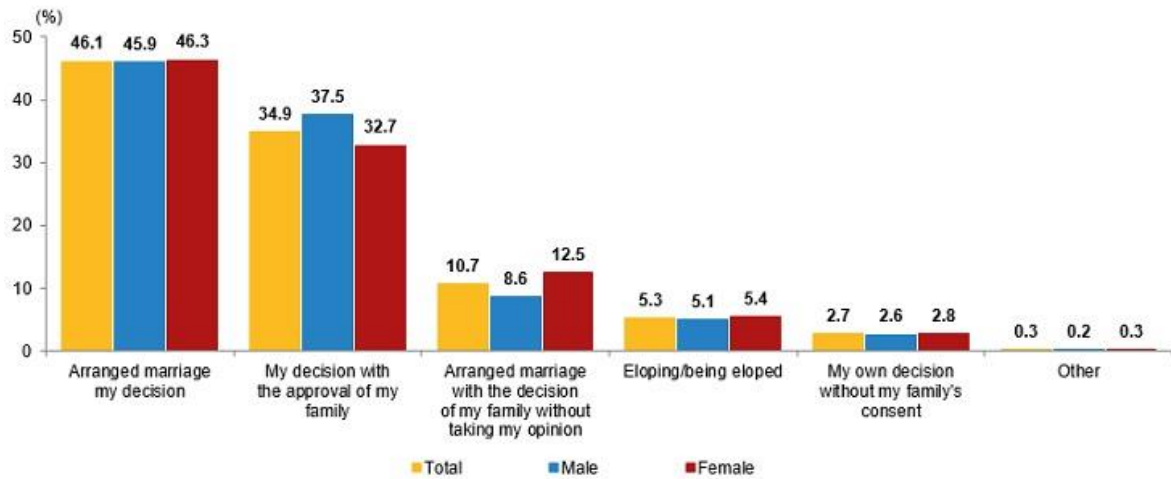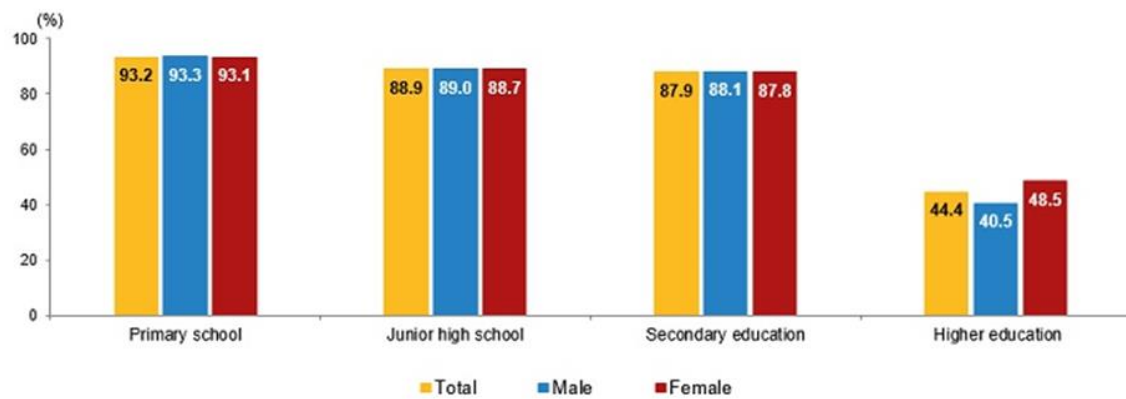Diagram 2. Decision of marriage by sex, 2021 (*Türkiye Family Structure Survey…, 2022*)

Diagram 3. Net enrolment rate by level of education and sex, 2020/'2. (*Youth in Statistics…,*

2022)

Diagram 4. Proportion of those who have completed at least one educational level by sex (%), 2008-2020. (*Women in Statistics…, 2022).*
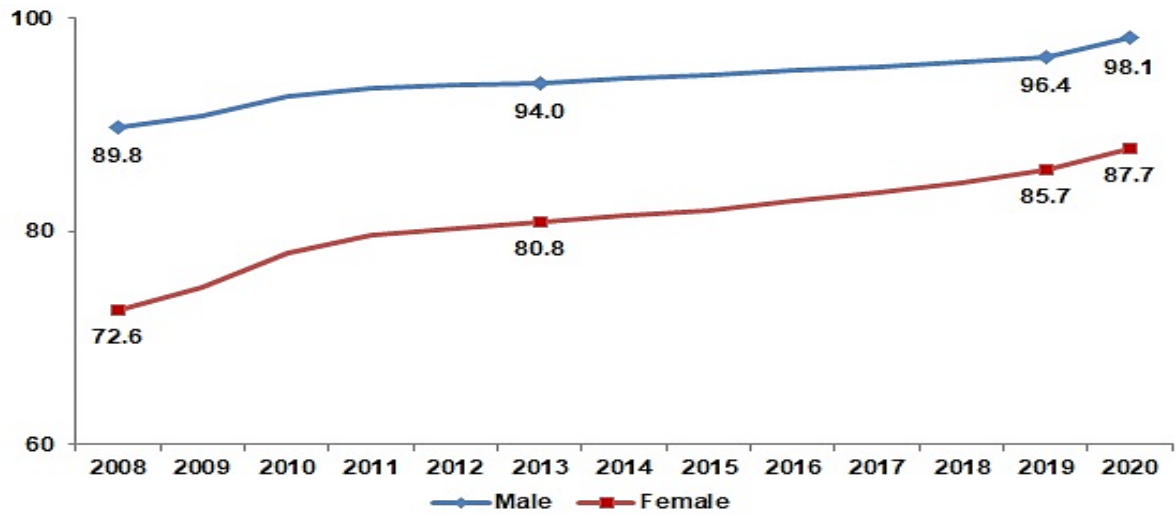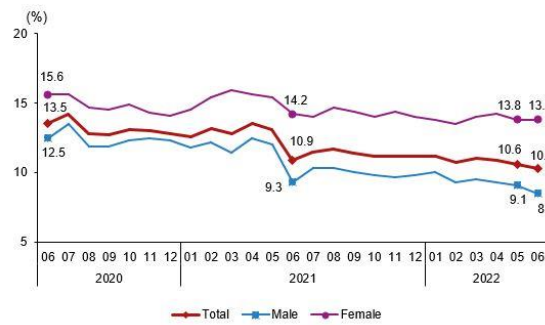

Diagram 5. Unemployment and Employment Rates (June 2020-June 2022). (*Labour Force Statistics, 2022*).
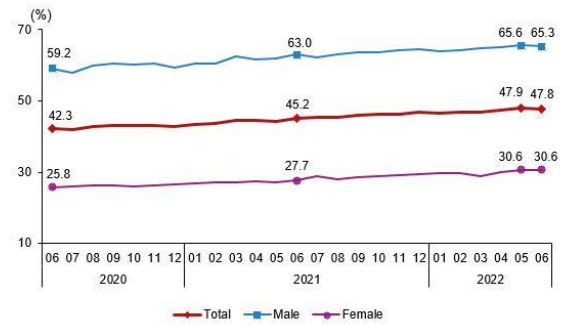
Table 1. Spouses at first marriages by age group, 2011-2021 (*Toplumsal Cinsiyet İstatistikleri…, 2022*)

5.1 Yaş grubuna göre ilk defa evlenenler, 2011-2021
Spouses at first marriages by age group, 2011-2021

Yaş grubu Age group	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020(r)	2021
Erkek-Male											
Toplam Total	509 739	515 198	513 728	512 612	514 329	503 480	483 501	467 882	455 965	407 663	472 304
16-19	14 203	14 189	13 532	12 603	11 641	10 955	9 805	9 291	8 367	6 915	6 857
20-24	160 772	158 578	154 091	151 530	148 415	143 148	134 191	125 516	116 972	104 689	114 891
25-29	229 455	231 029	232 504	230 856	232 337	226 736	219 078	212 611	210 826	188 441	219 124
30-34	81 494	85 431	86 218	88 397	90 237	88 387	86 138	85 644	85 011	76 226	93 080
35-39	17 410	18 984	20 236	21 445	23 418	25 296	25 199	25 395	24 987	22 147	26 980
40-44	4 119	4 599	4 878	5 437	5 776	6 225	6 312	6 543	6 875	6 590	8 145
45-49	1 462	1 474	1 413	1 507	1 594	1 709	1 793	1 867	1 896	1 736	2 132
50+	824	914	855	837	911	1 024	985	1 015	1 031	919	1 095
Bilinmeyen Unknown	-	-	1	-	-	-	-	-	-	-	-
Kadın - Female											
Toplam Total	514 423	520 069	516 635	513 238	512 234	497 722	477 408	459 812	447 055	399 237	462 317
16-19	130 129	128 550	122 537	115 660	107 665	98 933	88 739	81 647	71 177	58 413	57 770
20-24	207 432	208 275	205 595	205 527	205 720	200 386	192 214	184 144	177 698	160 508	182 111
25-29	123 432	125 961	131 141	133 205	138 994	138 728	138 829	137 528	142 053	129 855	160 090
30-34	35 940	38 309	38 076	38 564	38 498	37 408	35 852	35 267	35 505	32 153	41 078
35-39	10 860	11 436	11 729	12 101	12 979	13 884	13 151	12 728	12 032	10 309	11 976
40-44	3 700	4 234	4 493	4 947	5 094	5 018	5 164	4 867	4 921	4 595	5 293
45-49	1 819	1 956	1 798	1 871	1 866	1 922	2 037	2 185	2 198	2 053	2 328
50+	1 111	1 347	1 265	1 363	1 418	1 443	1 422	1 446	1 471	1 351	1 671
Bilinmeyen Unknown	-	1	1	-	-	-	-	-	-	-	-

TÜİK, Toplumsal Cinsiyet İstatistikleri, 2021   TurkStat, Gender Statistics, 2021
Kaynak: Evlenme İstatistikleri, 2011-2021   Source: Marriage Statistics, 2011-2021
(r) Evlenme verileri güncel idari kayıtlarla revize edilmiştir.   (r) Marriage data were revised with updated administrative records.
- Bilgi yoktur.   - Denotes magnitude null.

Table 2. Marriages by province and age group, 2021 (*Toplumsal Cinsiyet İstatistikleri…, 2022*)

5.3 İllere ve yaş grubuna göre evlenenler, 2021
Marriages by province and age group, 2021
[Olay yerine göre-By the place of event]

İl / Province	Cinsiyet / Sex	Toplam / Total	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Bilinmeyen / Unknown
Toplam-Total	Erkek-Male	561 710	6 920	116 610	226 899	107 109	43 014	23 128	13 008	8 433	6 443	4 189	2 943	1 642	1 372	-
	Kadın-Female	561 710	59 661	191 966	177 690	60 262	29 517	18 631	11 098	6 069	3 723	1 818	830	322	120	3
Adana	Erkek-Male	15 573	175	3 354	6 059	3 023	1 185	647	368	226	218	147	103	35	33	-
	Kadın-Female	15 573	1 783	5 420	4 631	1 693	808	563	291	173	115	57	28	8	2	1
Adıyaman	Erkek-Male	5 055	40	1 006	2 293	1 054	291	147	71	41	37	22	23	18	12	-
	Kadın-Female	5 055	663	1 977	1 543	460	181	97	69	30	21	10	1	1	2	-
Afyonkarahisar	Erkek-Male	5 267	133	1 739	1 940	719	303	145	83	61	62	27	26	14	15	-
	Kadın-Female	5 267	887	2 185	1 278	378	199	141	93	52	30	13	5	6	-	-
Ağrı	Erkek-Male	3 833	58	1 258	1 719	550	131	41	28	13	18	2	8	5	2	-
	Kadın-Female	3 833	1 320	1 508	699	175	58	33	19	9	6	2	1	1	1	1
Amasya	Erkek-Male	2 017	14	383	878	380	156	65	38	37	19	15	17	4	11	-
	Kadın-Female	2 017	156	737	658	215	99	59	34	30	16	7	2	4	-	-
Ankara	Erkek-Male	34 770	231	5 699	14 309	7 310	2 969	1 670	873	631	464	277	176	90	71	-
	Kadın-Female	34 770	2 174	10 272	12 673	4 586	2 135	1 252	748	443	274	125	61	19	7	1
Antalya	Erkek-Male	16 977	180	2 855	6 212	3 229	1 683	989	635	451	307	189	136	61	50	-
	Kadın-Female	16 977	1 179	5 035	5 307	2 132	1 242	870	571	313	181	90	34	18	5	-
Artvin	Erkek-Male	953	8	92	370	244	109	52	28	20	9	6	7	4	4	-
	Kadın-Female	953	47	238	396	132	56	31	25	11	11	4	2	-	-	-
Aydın	Erkek-Male	7 795	98	1 419	2 811	1 505	692	432	256	178	144	125	72	41	22	-
	Kadın-Female	7 795	778	2 310	2 314	923	536	354	258	142	100	49	25	5	1	-
Balıkesir	Erkek-Male	8 129	128	1 561	3 155	1 464	598	397	251	180	144	110	75	30	36	-
	Kadın-Female	8 129	742	2 661	2 499	874	460	336	220	152	95	53	25	8	4	-
Bilecik	Erkek-Male	1 357	12	269	559	268	101	60	24	29	16	9	4	4	2	-
	Kadın-Female	1 357	98	521	430	138	66	46	32	14	5	4	2	1	-	-
Bingöl	Erkek-Male	1 823	15	313	777	423	148	60	29	16	18	9	5	5	5	-
	Kadın-Female	1 823	185	662	597	206	69	45	38	11	2	7	-	-	1	-
Bitlis	Erkek-Male	2 421	23	642	1 117	445	108	38	14	8	9	9	4	3	1	-
	Kadın-Female	2 421	594	1 010	577	145	48	22	10	5	5	2	2	-	1	-
Bolu	Erkek-Male	1 828	14	346	774	352	155	86	37	18	11	16	10	6	3	-
	Kadın-Female	1 828	107	613	648	226	107	57	41	12	8	6	2	-	1	-
Burdur	Erkek-Male	1 770	30	406	710	274	130	77	43	34	18	19	13	9	7	-
	Kadın-Female	1 770	224	652	496	156	86	64	38	21	18	10	3	1	1	-
Bursa	Erkek-Male	20 119	197	3 565	8 589	3 892	1 575	910	502	331	238	136	98	45	41	-
	Kadın-Female	20 119	1 457	6 882	6 915	2 155	1 085	753	429	205	128	69	24	15	2	-
Çanakkale	Erkek-Male	3 367	46	533	1 256	701	308	170	104	99	59	48	24	16	3	-
	Kadın-Female	3 367	261	1 010	1 098	397	213	165	104	59	30	18	11	1	-	-
Çankırı	Erkek-Male	1 069	12	307	423	167	53	35	23	11	11	10	6	5	6	-
	Kadın-Female	1 069	135	455	292	67	41	31	18	10	11	5	2	2	-	-
Çorum	Erkek-Male	3 545	27	837	1 402	637	252	112	68	52	53	29	24	29	23	-
	Kadın-Female	3 545	352	1 326	1 082	321	155	110	71	52	46	16	8	5	1	-
Denizli	Erkek-Male	7 538	92	1 463	2 951	1 401	667	370	190	130	110	60	56	23	25	-
	Kadın-Female	7 538	658	2 505	2 402	826	432	323	167	98	59	47	17	4	-	-
Diyarbakır	Erkek-Male	11 714	229	3 064	4 782	2 313	688	270	119	63	84	32	36	19	15	-
	Kadın-Female	11 714	1 918	4 442	3 313	1 171	443	221	117	45	29	7	7	-	1	-
Edirne	Erkek-Male	2 320	75	454	828	459	202	120	63	51	26	19	15	5	3	-
	Kadın-Female	2 320	318	639	720	271	152	94	66	28	16	10	6	-	-	-
Elazığ	Erkek-Male	4 035	31	757	1 720	847	304	164	79	46	46	14	18	3	6	-
	Kadın-Female	4 035	267	1 484	1 414	403	204	136	66	29	21	8	-	2	1	-
Erzincan	Erkek-Male	1 309	11	217	627	232	106	44	27	16	9	8	5	2	5	-
	Kadın-Female	1 309	103	473	471	130	45	39	17	16	8	5	-	2	-	-
Erzurum	Erkek-Male	4 694	72	982	2 147	944	283	95	61	24	35	21	12	13	5	-
	Kadın-Female	4 694	688	1 785	1 539	369	123	77	49	27	21	7	6	2	1	-
Eskişehir	Erkek-Male	5 602	65	890	2 158	1 230	550	275	153	103	74	53	26	16	9	-
	Kadın-Female	5 602	325	1 589	2 053	765	364	205	141	82	49	18	7	3	1	-
Gaziantep	Erkek-Male	16 823	242	5 500	6 690	2 370	820	422	233	147	137	100	77	51	34	-
	Kadın-Female	16 823	3 612	6 976	3 807	1 103	521	372	206	99	77	29	14	3	4	-

TÜİK, Toplumsal Cinsiyet İstatistikleri, 2021
Kaynak: TÜİK, Evlenme İstatistikleri, 2021
- Bilgi yoktur.

TurkStat, Gender Statistics, 2021
Source: TurkStat, Marriage Statistics, 2021
- Denotes magnitude null.

Table 3. The Literacy Rate in Turkey 2019 (*O'Neill, 2022*)

Turkey: Literacy rate from 2007 to 2019, total and by gender

Characteristic	Adult total	Adult male	Adult female
2019	96.74%	99.08%	94.42%
2017	96.15%	98.82%	93.5%
2016	96.17%	98.78%	93.56%
2015	95.6%	98.58%	92.65%
2014	95.44%	98.5%	92.4%
2013	95.26%	98.4%	92.14%
2012	94.92%	98.26%	91.6%
2011	94.11%	97.94%	90.31%
2010	92.66%	97.3%	88.07%
2009	90.82%	96.38%	85.35%
2007	88.66%	96.2%	81.26%

Showing entries 1 to 11 (11 entries in total)

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Table 4. Illiterate Population (*Institute for Statistics, 2022*)

	TOTAL	MALE	FEMALE	
Illiterate population				
15-24 years	12,599	2,473	10,126	(2019)
15 years and older	2,088,846	284,914	1,803,932	(2019)

Table 5. Literacy Rate (*Institute for Statistics, 2022*)

	TOTAL	MALE	FEMALE	
Literacy rate (%)				
15-24 years	99.9	100	99.8	(2019)
15 years and older	96.7	99.1	94.4	(2019)
65 years and older	83.1	94.6	74	(2019)

Table 6. Schools and Educational Institutions by Gender (*Education, Culture, Sport and Tourism, 2022*)

2021	General Total	Illiterate	Literate without a diploma	Primary School	Primary Education	Lower Secondary School	Upper Secondary School	Universities and other higher educational Ins.	Master	Doctorate
Female	37,877,223	1,593,893	4,305,606	9,610,023	2,232,443	6,204,007	7,248,883	5,550,811	638,869	96,774
Male	37,879,709	268,639	3,224,669	7,267,940	2,899,977	7,434,209	9,448,709	6,086,476	756,363	136,568

Figure 1. Monument Counter (*Şiddeten Ölen Kadınlar İçin Dijital Anıt, 2022*)

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