



Sensitivity plot of $c_y: \{(m^4 + 3 * m) * 10^{-4}\}$ - Cycle of money

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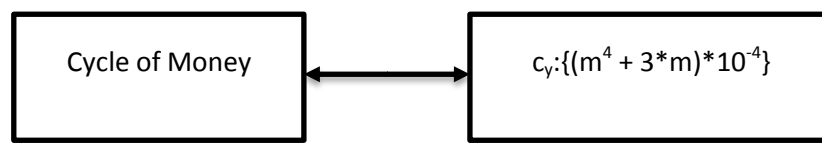
ABSTRACT

In this work, financial liquidity has a higher rate than escape savings. The rate of the velocity of financial liquidity is two magnitudes higher than the velocity of escape savings. It uses mathematical definitions by the cycle of money and shows the sensitivity plot of $c_y: \{(m^4 + 3 * m) * 10^{-4}\}$. In this case, financial liquidity is identical to the cycle of money.

INTRODUCTION

The present research studies the case of the money cycle, as formulated by the current literature (Challoumis, 2023j): “This paper analyzes the case of the cycle of money with and without the escaping savings. The same procedure is followed for the enforcement savings (Arai et al., 2018; Biernaski & Silva, 2018; Brownell & Frieden, 2009; dos Santos Benso Maciel et al., 2020; Ewert et al., 2021; Fan et al., 2020; Kiktenko, 2020; Kreft & Sobel, 2005; Mackean et al., 2020; Rizzo & Throsby, 2006; Sánchez et al., 2020; Shamah-Levy et al., 2019; Turner, 2010). This could happen when there are returned savings and when there are no returned savings. This economic comparison has as a result that in a market consumption and investments in combination with savings have an important role, subject to the public and the tax policy (Altman, 2012; Arabyan, 2016; Guardino & Mettler, 2020; Haigh, 2020; Kananen, 2012; Muñoz & Flores, 2020; Ng, 2018; Reeves et al., 2019; Snow, 1988; Williamson & Luke, 2020). Therefore the appropriate tax rate is the key element for the appropriate public policy”. It follows a figure that presents the purpose of the current research:

Figure 1: Cycle of money for $c_y: \{(m^4 + 3*m)*10^{-4}\}$



The fixed length principle is satisfied when the public policy with the lower taxation of uncontrolled transactions and the higher taxation of the controlled transactions is applied.

LITERATURE REVIEW

The participants make agreements for the control transactions which determine the allocation of profits and losses. To the agreements should be mentioned the changes in the contracts (Challoumis, 2018c, 2019c, 2023d, 2023u, 2023f, 2023b, 2023q, 2024g, 2024a, 2024l, 2024k, 2020d, 2020b, 2021f, 2021k, 2021a, 2022e, 2022c, 2022b; Challoumis & Savic, 2024): “This is the reason why the tax authorities should make periodic inspections. The periodic specification of contracts is important for comparability analysis. These periodic inspections of the companies that participate in controlled transactions are crucial for the arm’s length principle. Then, the determination of the cost-sharing depends on the periodic check of companies that are tested parties. The scope of the companies of controlled transactions is to face the issues that are connected with the taxation of their activities. Therefore, the requirements for the companies of controlled transactions with the tax authorities should be in the range of the arm’s length principle. Thereupon, the appropriate agreement of the companies of controlled transactions is that which permits them the maximization of their profits in tax environments with low tax rates, and the maximization of costs in economic environments with high tax rates.

Moreover, should be notified that the companies of controlled transactions and the same time the inspections of tax authorities are done under the condition of proportional adjustments (Challoumis, 2018g, 2018b, 2019f, 2019e, 2020c, 2020a, 2021d, 2022d, 2023p, 2023ag, 2023ab, 2023ah, 2023g, 2023ac, 2023e, 2024e). The interpretation of the condition of the proportional adjustments is that the companies that participate in controlled transactions many times don't have the appropriate data and uncontrolled transactions of similar circumstances to compare and therefore they proportionally adjust their data (Arbel et al., 2019; Hasselman & Stoker, 2017; Hausman et al., 2016; Islam et al., 2020; Jensen, 2020; Menguy, 2020; Oueslati, 2015; Scholvin & Malamud, 2020; Spiel et al., 2018; Tummers, 2019). According to (Challoumis, 2024a) This means that if the companies that are tested parties conclude that the profits and losses of companies from uncontrolled transactions are much higher or much fewer then they make a proportional analogy to compare them with their data. The production of goods or services creates profits and costs for the companies. Based on the prior scrutiny:

$$u = s(zf + \tilde{z}d) \quad (1)$$

$$z = |\tilde{z} - 1| \quad (2)$$

The symbol u is about the impact factor of the comparability analysis which has any method to the s . The symbol z is a coefficient which takes values between 0 and 1. What value could be received is determined by the influence of the method (using the best method rule) on the s . The symbol of f is about the cost which comes up from the production of goods, and the symbol of d is about the cost which comes from the distribution of the goods (Challoumis, 2019g, 2019a, 2023m, 2023w, 2023h, 2023c, 2023y, 2023ai, 2023i, 2024c, 2024m, 2021h, 2021e, 2021c, 2023v, 2023s, 2023n, 2023l, 2023z). According to Eq. (1) - (2) is plausible to determine the following equations:

$$u_c = zf + \tilde{z}d \quad (3)$$

$$b = (p - u_c) * j_1 \quad (4)$$

The symbol of b in the prior equation is about the amount of taxes that should be paid to the companies of controlled transactions in the application of the arm's length principle. The u_c is the amount of tax obligations that can be avoided through the allocations of profits and losses. Moreover, j_1 is a coefficient for the rate of taxes. Then, the Eq. (5) shows the case of the arm's length principle. In addition, in the case of the fixed length principle:

$$v = p * j_2 \quad (5)$$

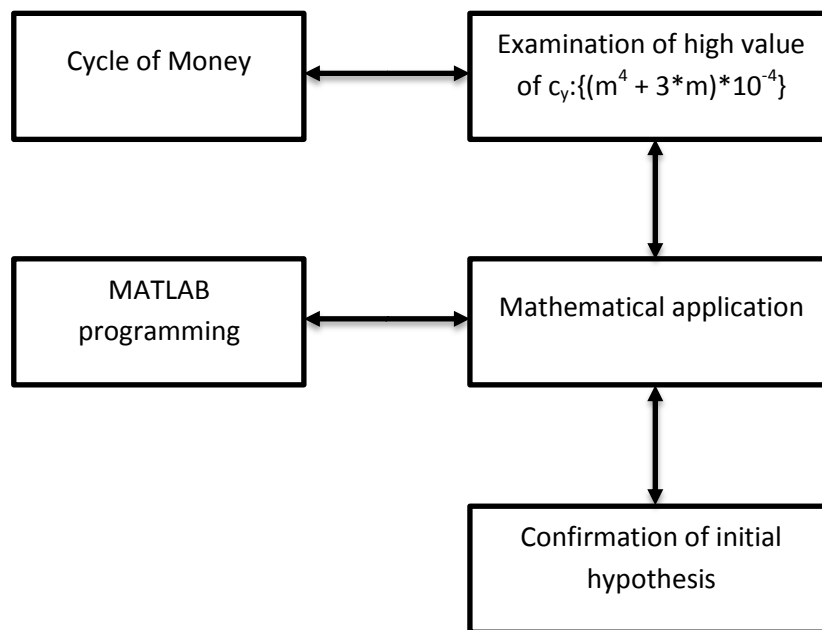
The symbol of v in the previous equation shows the taxes that should be paid to the enterprises of controlled transactions in the application of the fixed length principle (Blundell & Preston, 2019; Challoumis, 2018c; Dancygier & Laitin, 2014; Dollery & Worthington, 1996; Fronzaglia et al., 2019; Grabs et al., 2020; Jeon et al., 2020; Laplane & Mazzucato, 2020; Mancuso & Moreira, 2013;

Saleem et al., 2017). Then, j_2 is a coefficient for the rate of taxes in the case of the fixed length principle:

$$v \geq b \tag{6}$$

The tax for the companies that participate in controlled transactions of transfer pricing in the case of the fixed length principle is higher or at least equal to that of the case of the arm’s length principle. Thereupon, with the fixed length principle the enterprises of controlled transactions can tackle issues that come from the allocation of the profits and losses. Therefore, the tax authorities can face the transfer pricing effects on the global tax revenue. The fixed length principle permits the recovery of the tax losses of the global tax revenue from the controlled transactions of the transfer pricing” (Challoumis, 2018a, 2019d, 2024b, 2024i, 2024j, 2024h, 2019b, 2021j, 2021g, 2023o, 2023r, 2023t, 2023j, 2024n). The hypothesis is to establish that the velocity of financial liquidity with power two times higher than the velocity of escape savings gives a high value for the cycle of money:

Figure 2: Cost sharing and application of fixed length principle



METHODOLOGY

The tax revenues correspond to the savings that the companies could have if the taxes were avoided. The definitions are defined by prior mathematical research (Challoumis, 2018h, 2018d, 2018c, 2018e, 2019g, 2019f, 2019e, 2020d, 2020a): “The way that these savings are administrated is different from case to case. Then the benefits of the companies could be managed in a completely different way, as could be saved or could be taxed (Challoumis, 2018f, 2018i, 2021b, 2021i, 2022a, 2023a, 2023k, 2023af, 2023aa, 2023ae, 2023x, 2023ad, 2024d, 2024f). The theory of the cycle of money shows when the savings

robust the economy and when the taxes robust the economy (Bartels, 2005; Béland, 2017; Bowling et al., 2019; Carfora et al., 2021; John, 2018; Kalambokidis, 2014; Ladvoat & Lucas, 2019; Leckel et al., 2020; Maestre-Andrés et al., 2019; Mohindra, 2007; Smętkowski et al., 2020; Ustinovich & Kulikov, 2020). This determination must be a separation of savings into the non-returned savings (or escaped savings) and the returned savings (or enforcement savings). For the scope of this analysis below are demonstrated the equations which are:

$$\alpha = \alpha_s + \alpha_t \text{ or } \frac{1}{v} + \alpha_t \quad (7)$$

$$x_m = m - a \quad (8)$$

$$m = \mu + \alpha_p \quad (9)$$

$$\mu = \sum_{i=0}^n \mu_i \quad (10)$$

$$\alpha_p = \sum_{j=0}^m \alpha_{pj} \quad (11)$$

$$c_m = \frac{dx_m}{dm} \quad (12)$$

$$c_\alpha = \frac{dx_m}{da} \quad (13)$$

$$c_y = c_m - c_\alpha \quad (14)$$

The variable of α symbolizes the case of the escaped savings. This means that there are savings that are not returning to the economy or come back after a long-term period. The variable of α_s symbolizes the case that there are escaped savings that come from transfer pricing activities. The variable of α_t symbolizes the case that there are escape savings not from transfer pricing activities but from any other commercial activity. For instance, α_t could refer to the commercial activities that come from uncontrolled transactions. The variable of m symbolizes the financial liquidity in an economy. The variable of μ symbolizes the consumption in an economy. The variable of α_p symbolizes the enforcement savings, which come from the citizens and small and medium-sized enterprises. The variable of x_m symbolizes the condition of financial liquidity in an economy. The variable of c_m symbolizes the velocity of financial liquidity increases or decreases. The variable of c_α symbolizes the velocity of escape savings". Therefore, the variable of c_y symbolizes the term of the cycle of money. Thereupon, the cycle of money shows the level of the dynamic of an economy and its robustness.

RESULTS RESEARCH

The current section examines the following equations. The purpose is to show that the two times higher magnitude of the velocity of financial liquidity compared to escape savings gives a high cycle of money. Case study analysis of c_y :

$$c_m = (m^4 + 4 * m) * 10^{-4} \quad (15)$$

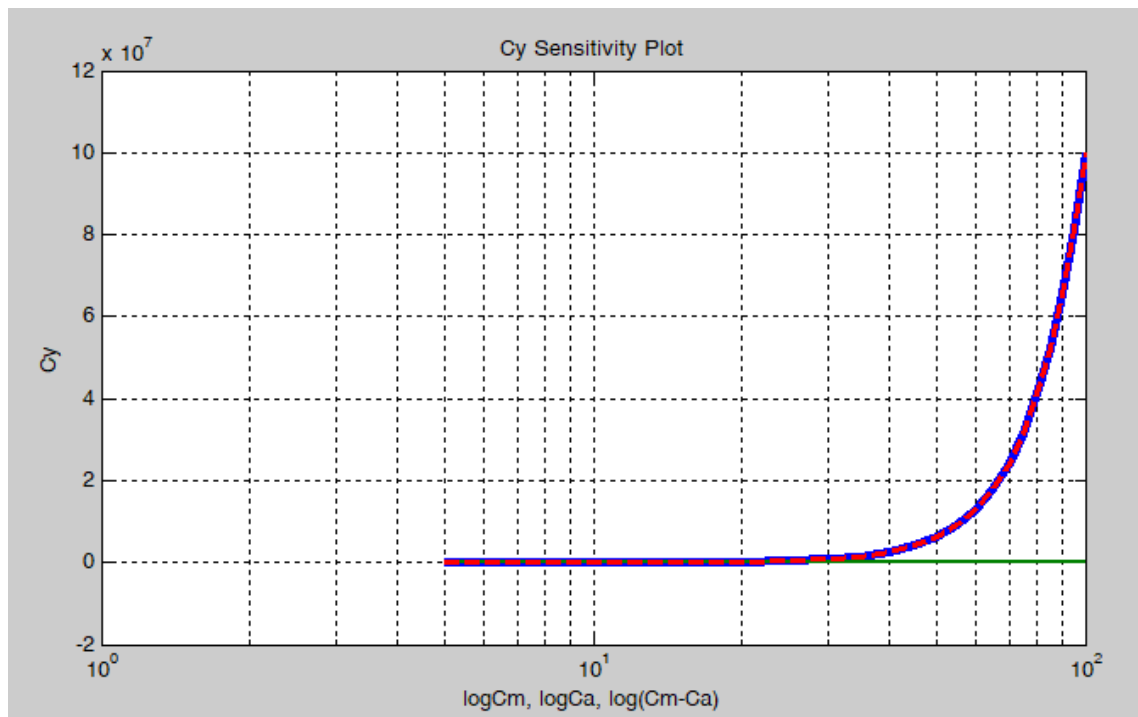
$$c_a = 10^{-4} * m \quad (16)$$

$$\log c_m = \log[(m^4 + 4m) * 10^{-4}] \quad (17)$$

$$\log c_a = \log(m * 10^{-4}) \quad (18)$$

Based on Eq. (14) - (18):

Figure 3: $c_y = f(\log c_m, \log c_a)$



The red line is about the cycle of money and the blue line is about the velocity of financial liquidity. It is obvious that because of the high power of the velocity of financial liquidity, financial liquidity is completely identical to the cycle of money.

DISCUSSION

From the prior graph, it is obvious that when the velocity of financial liquidity is higher than the escape savings then the cycle of money is increased geometrically. The importance of an order of magnitude of financial liquidity secures that the cycle of money is at its higher level, according to $c_y = (m^4 + 4 * m - m) * 10^{-4} = (m^4 + 3 * m) * 10^{-4}$.

CONCLUSIONS AND RECOMMENDATIONS

The high financial liquidity means that the structure of the economy has an appropriate form, where the bigger companies don't substitute the rate of the economic activities of the smaller companies, and they have (or they have transferred) their economic activities on the field of factoring or high know-how sector.

ADVANCED RESEARCH

The current work and methodology have many applications, as many different equations could be studied using the same concept aiming to reveal different cases.

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REFERENCES

- Altman, M. (2012). Behavioral Economics, Economic Theory and Public Policy. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1152105>
- Arabyan, O. (2016). Public infrastructure policies and economic geography. *Glasnik Srpskog Geografskog Društva Bulletin of the Serbian Geographical Society*, 96(1). <https://doi.org/10.2298/gsgd1601093a>
- Arai, R., Naito, K., & Ono, T. (2018). Intergenerational policies, public debt, and economic growth: A politico-economic analysis. *Journal of Public Economics*, 166. <https://doi.org/10.1016/j.jpubeco.2018.08.006>
- Arbel, Y., Fialkoff, C., & Kerner, A. (2019). Public policy for reducing tax evasion: implications of the Yule-Simpson paradox. *Applied Economics Letters*, 26(13). <https://doi.org/10.1080/13504851.2018.1537471>
- Bartels, L. M. (2005). Homer Gets a Tax Cut: Inequality and Public Policy in the American Mind. *Perspectives on Politics*, 3(1). <https://doi.org/10.1017/S1537592705050036>
- Béland, D. (2017). Identity, politics, and public policy. *Critical Policy Studies*, 11(1). <https://doi.org/10.1080/19460171.2016.1159140>
- Biernaski, I., & Silva, C. L. (2018). Main variables of Brazilian public policies on biomass use and energy. *Brazilian Archives of Biology and Technology*, 61(Specialissue). <https://doi.org/10.1590/1678-4324-smart-2018000310>
- Blundell, R., & Preston, I. (2019). Principles of Tax Design, Public Policy and Beyond: The Ideas of James Mirrlees, 1936–2018. *Fiscal Studies*, 40(1). <https://doi.org/10.1111/1475-5890.12183>
- Bowling, S. J., Boyland, L. G., & Kirkeby, K. M. (2019). Property Tax Cap Policy in Indiana and Implications for Public School Funding Equity. *International Journal of Education Policy and Leadership*, 15(9). <https://doi.org/10.22230/ijep1.2019v15n9a881>
- Brownell, K. D., & Frieden, T. R. (2009). Ounces of Prevention – The Public Policy Case for Taxes on Sugared Beverages. *New England Journal of Medicine*, 360(18). <https://doi.org/10.1056/nejmp0902392>

- Carfora, A., Pansini, R. V., & Scandurra, G. (2021). The role of environmental taxes and public policies in supporting RES investments in EU countries: Barriers and mimicking effects. *Energy Policy*, 149. <https://doi.org/10.1016/j.enpol.2020.112044>
- Challoumis, C. (2018a). Analysis of the velocities of escaped savings with that of financial liquidity. *Ekonomski Signali*, 13(2), 1–14. <https://doi.org/10.5937/ekonsig1802001c>
- Challoumis, C. (2018b). Identification of Significant Economic Risks to the International Controlled Transactions. *Economics and Applied Informatics*, 2018(3), 149–153. <https://doi.org/https://doi.org/10.26397/eai1584040927>
- Challoumis, C. (2018c). Methods of Controlled Transactions and the Behavior of Companies According to the Public and Tax Policy. *Economics*, 6(1), 33–43. <https://doi.org/10.2478/eoik-2018-0003>
- Challoumis, C. (2018d). Multiple Axiomatics Method Through the Q.E. Methodology. *SSRN Electronic Journal*, 1–9. <https://doi.org/10.2139/ssrn.3223642>
- Challoumis, C. (2018e). Q.E. (Quantification of Everything) Method and Econometric Analysis. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3150101>
- Challoumis, C. (2018f). THE IMPACT FACTOR OF HEALTH ON THE ECONOMY USING THE CYCLE OF MONEY. *Bulletin of the Transilvania University of Braşov*, 11(60), 125–136. https://webbut.unitbv.ro/index.php/Series_V/article/view/2533/1979
- Challoumis, C. (2018g). The Keynesian Theory and the Theory of Cycle of Money. *Hyperion Economic Journal*, 6(3), 3–8. [https://hej.hyperion.ro/articles/3\(6\)_2018/HEJnr3\(6\)_2018_A1Challoumis.pdf](https://hej.hyperion.ro/articles/3(6)_2018/HEJnr3(6)_2018_A1Challoumis.pdf)
- Challoumis, C. (2018h). The Role of Risk to the International Controlled Transactions. *Economics and Applied Informatics*, 3, 57–64. <https://doi.org/10.26397/eai1584040917>
- Challoumis, C. (2018i). The Role of Risk to the International Controlled Transactions. *Economics and Applied Informatics*, 2018(3), 57–64. <https://doi.org/https://doi.org/10.26397/eai1584040917>
- Challoumis, C. (2019a). The arm's length principle and the fixed length principle economic analysis. *World Scientific News*, 115(2019), 207–217. <http://www.worldscientificnews.com/wp-content/uploads/2018/11/WSN-115-2019-207-217.pdf>
- Challoumis, C. (2019b). The cycle of money with and without the escaped savings. *Ekonomski Signali*, 14(1), 89–99. <https://doi.org/336.76336.741.236.5>
- Challoumis, C. (2019c). The Impact Factor of Education on the Public Sector and International Controlled Transactions. *Complex System Research Centre*, 2019, 151–160. https://www.researchgate.net/publication/350453451_The_Impact_Facto

r_of_Education_on_the_Public_Sector_and_International_Controlled_Transactions

- Challoumis, C. (2019d). The Issue of Utility of Cycle of Money. *Journal Association SEPIKE*, 2019(25), 12–21. https://5b925ea6-3d4e-400b-b5f3-32dc681218ff.filesusr.com/ugd/b199e2_dd29716b8bec48ca8fe7fbcfd47cdd2e.pdf
- Challoumis, C. (2019e). The R.B.Q. (Rational, Behavioral and Quantified) Model. *Ekonomika*, 98(1), 6–18. <https://doi.org/10.15388/ekon.2019.1.1>
- Challoumis, C. (2019f). Theoretical analysis of fuzzy logic and Q. E. method in econo-mics. *IKBFU's Vestnik*, 2019(01), 59–68.
- Challoumis, C. (2019g). Transfer Pricing Methods for Services and the Policy of Fixed Length Principle. *Economics and Business*, 33(1), 222–232. <https://doi.org/https://doi.org/10.2478/eb-2019-0016>
- Challoumis, C. (2020a). Analysis of the Theory of Cycle of Money. *Acta Universitatis Bohemiae Meridionalis*, 23(2), 13–29. <https://doi.org/https://doi.org/10.2478/acta-2020-0004>
- Challoumis, C. (2020b). Impact Factor of Capital to the Economy and Tax System. *Complex System Research Centre*, 2020, 195–200. https://www.researchgate.net/publication/350385990_Impact_Factor_of_Capital_to_the_Economy_and_Tax_System
- Challoumis, C. (2020c). The Impact Factor of Costs to the Tax System. *Journal of Entrepreneurship, Business and Economics*, 8(1), 1–14. <http://scientificia.com/index.php/JEBE/article/view/126>
- Challoumis, C. (2020d). The Impact Factor of Education on the Public Sector – The Case of the U.S. *International Journal of Business and Economic Sciences Applied Research*, 13(1), 69–78. <https://doi.org/10.25103/ijbesar.131.07>
- Challoumis, C. (2021a). Chain of cycle of money. *Acta Universitatis Bohemiae Meridionalis*, 24(2), 49–74.
- Challoumis, C. (2021b). Index of the cycle of money - The case of Belarus. *Economy and Banks*, 2.
- Challoumis, C. (2021c). Index of the cycle of money - The case of Greece. *IJBESAR (International Journal of Business and Economic Sciences Applied Research)*, 14(2), 58–67.
- Challoumis, C. (2021d). Index of the Cycle of Money - The Case of Latvia. *Economics and Culture*, 17(2), 5–12. <https://doi.org/10.2478/jec-2020-0015>
- Challoumis, C. (2021e). Index of the cycle of money - The case of Montenegro. *Montenegrin Journal for Social Sciences*, 5(1–2), 41–57.
- Challoumis, C. (2021f). Index of the cycle of money - The case of Serbia. *Open Journal for Research in Economics (OJRE)*, 4(1). <https://centerprode.com/ojre.html>
- Challoumis, C. (2021g). Index of the cycle of money - The case of Slovakia. *S T U D I A C O M M E R C I A L I A B R A T I S L A V E N S I A Ekonomická Univerzita v Bratislave*, 14(49), 176–188.
- Challoumis, C. (2021h). Index of the cycle of money - The case of Thailand. *Chiang Mai University Journal of Economics*, 25(2), 1–14. <https://so01.tci-thaijo.org/index.php/CMJE/article/view/247774/169340>

- Challoumis, C. (2021i). Index of the cycle of money - The case of Ukraine. *Actual Problems of Economics*, 243(9), 102–111. doi:10.32752/1993-6788-2021-1-243-244-102-111
- Challoumis, C. (2021j). Index of the cycle of money -the case of Bulgaria. *Economic Alternatives*, 27(2), 225–234. <https://www.unwe.bg/doi/eajournal/2021.2/EA.2021.2.04.pdf>
- Challoumis, C. (2021k). The cycle of money with and without the enforcement savings. *Complex System Research Centre*.
- Challoumis, C. (2022a). Conditions of the CM (Cycle of Money). In *Social and Economic Studies within the Framework of Emerging Global Developments, Volume -1, V. Kaya* (pp. 13–24). <https://doi.org/10.3726/b19907>
- Challoumis, C. (2022b). Impact Factor of the Rest Rewarding Taxes. In *Complex System Research Centre*. <https://doi.org/10.2139/ssrn.3154753>
- Challoumis, C. (2022c). Index of the cycle of money - The case of Moldova. *Eastern European Journal of Regional Economics*, 8(1), 77–89.
- Challoumis, C. (2022d). Index of the cycle of money - the case of Poland. *Research Papers in Economics and Finance*, 6(1), 72–86. <https://journals.ue.poznan.pl/REF/article/view/126/83>
- Challoumis, C. (2022e). Structure of the economy. *Actual Problems of Economics*, 247(1).
- Challoumis, C. (2023a). A comparison of the velocities of minimum escaped savings and financial liquidity. In *Social and Economic Studies within the Framework of Emerging Global Developments, Volume - 4, V. Kaya* (pp. 41–56). <https://doi.org/10.3726/b21202>
- Challoumis, C. (2023b). Capital and Risk in the Tax System. In *Complex System Research Centre* (pp. 241–244).
- Challoumis, C. (2023c). Chain of the Cycle of Money with and without Maximum and Minimum Mixed Savings. *European Multidisciplinary Journal of Modern Science*, 23(2023), 1–16.
- Challoumis, C. (2023d). Chain of the Cycle of Money with and Without Maximum Mixed Savings (Three-Dimensional Approach). *Academic Journal of Digital Economics and Stability*, 34(2023), 43–65.
- Challoumis, C. (2023e). Chain of the Cycle of Money with and without Minimum Mixed Savings (Three-Dimensional Approach). *International Journal of Culture and Modernity*, 33(2023), 22–33.
- Challoumis, C. (2023f). Comparisons of the Cycle of Money Based on Enforcement and Escaped Savings. *Pindus Journal of Culture, Literature, and ELT*, 3(10), 19–28.
- Challoumis, C. (2023g). Comparisons of the cycle of money with and without the mixed savings. *Economics & Law*. <http://el.swu.bg/ikonomika/>
- Challoumis, C. (2023h). Currency rate of the CM (Cycle of Money). *Research Papers in Economics and Finance*, 7(1).
- Challoumis, C. (2023i). Elements of the Theory of Cycle of Money without Enforcement Savings. *International Journal of Finance and Business Management (IJFBM)* Vol. 2No. 1, 2023, 2(1), 15–28.

- <https://journal.multitechpublisher.com/index.php/ijfbm/article/view/1108/1202>
- Challoumis, C. (2023j). FROM SAVINGS TO ESCAPE AND ENFORCEMENT SAVINGS. *Cogito*, XV(4), 206–216.
- Challoumis, C. (2023k). G7 - Global Minimum Corporate Tax Rate of 15%. *International Journal of Multicultural and Multireligious Understanding (IJMMU)*, 10(7).
- Challoumis, C. (2023l). Impact factor of bureaucracy to the tax system. *Ekonomski Signali*, 18(2), 12.
- Challoumis, C. (2023m). Impact Factor of Liability of Tax System According to the Theory of Cycle of Money. In *Social and Economic Studies within the Framework of Emerging Global Developments Volume 3, V. Kaya* (Vol. 3, pp. 31–42). <https://doi.org/10.3726/b20968>
- Challoumis, C. (2023n). Index of the cycle of money: The case of Costa Rica. *Sapienza*, 4(3), 1–11. <https://journals.sapienzaeditorial.com/index.php/SIJIS>
- Challoumis, C. (2023o). Index of the cycle of money - The case of Canada. *Journal of Entrepreneurship, Business and Economics*, 11(1), 102–133. <http://scientificia.com/index.php/JEBE/article/view/203>
- Challoumis, C. (2023p). Index of the Cycle of Money - The Case of England. *British Journal of Humanities and Social Sciences*, 26(1), 68–77.
- Challoumis, C. (2023q). Index of the cycle of money - The case of Ukraine from 1992 to 2020. *Actual Problems of Economics*.
- Challoumis, C. (2023r). Maximum mixed savings on the cycle of money. *Open Journal for Research in Economics*, 6(1), 25–34.
- Challoumis, C. (2023s). Minimum Mixed Savings on Cycle of Money. *Open Journal for Research in Economics*, 6(2), 61–68. <https://centerprode.com/ojre/ojre0602/ojre-0602.html>
- Challoumis, C. (2023t). Multiple Axiomatics Method and the Fuzzy Logic. *MIDDLE EUROPEAN SCIENTIFIC BULLETIN*, 37(1), 63–68.
- Challoumis, C. (2023u). Principles for the Authorities on Activities with Controlled Transactions. *Academic Journal of Digital Economics and Stability*, 30(1), 136–152.
- Challoumis, C. (2023v). Risk on the tax system of the E.U. from 2016 to 2022. *Economics*, 11(2).
- Challoumis, C. (2023w). The Cycle of Money (C.M.) Considers Financial Liquidity with Minimum Mixed Savings. *Open Journal for Research in Economics*, 6(1), 1–12.
- Challoumis, C. (2023x). The Cycle of Money with and Without the Maximum and Minimum Mixed Savings. *Middle European Scientific Bulletin*, 41(2023), 47–56.
- Challoumis, C. (2023y). The cycle of money with and without the maximum mixed savings (Two-dimensional approach). *International Journal of Culture and Modernity*, 33(2023), 34–45.
- Challoumis, C. (2023z). The Cycle of Money with and Without the Minimum Mixed Savings. *Pindus Journal of Culture, Literature, and ELT*, 3(10), 29–39.

- Challoumis, C. (2023aa). The cycle of money with mixed savings. *Open Journal for Research in Economics*, 6(2), 41–50.
- Challoumis, C. (2023ab). The Theory of Cycle of Money - How Do Principles of the Authorities on Public Policy, Taxes, and Controlled Transactions Affect the Economy and Society? *International Journal of Social Science Research and Review (IJSSRR)*, 6(8).
- Challoumis, C. (2023ac). The Velocities of Maximum Escaped Savings with than of Financial Liquidity to the Case of Mixed Savings. *International Journal on Economics, Finance and Sustainable Development*, 5(6), 124–133.
- Challoumis, C. (2023ad). The Velocity of Escaped Savings and Maximum Financial Liquidity. *Journal of Digital Economics and Stability*, 34(2023), 55–65.
- Challoumis, C. (2023ae). The Velocity of Escaped Savings and Velocity of Financial Liquidity. *Middle European Scientific Bulletin*, 41(2023), 57–66.
- Challoumis, C. (2023af). Utility of cycle of money with and without the enforcement savings. *GOSPODARKA INNOWACJE*, 36(1), 269–277.
- Challoumis, C. (2023ag). Utility of Cycle of Money with and without the Escaping Savings. *International Journal of Business Diplomacy and Economy*, 2(6), 92–101.
- Challoumis, C. (2023ah). Utility of Cycle of Money without the Escaping Savings (Protection of the Economy). In *Social and Economic Studies within the Framework of Emerging Global Developments Volume 2, V. Kaya* (pp. 53–64). <https://doi.org/10.3726/b20509>
- Challoumis, C. (2023ai). Velocity of Escaped Savings and Minimum Financial Liquidity According to the Theory of Cycle of Money. *European Multidisciplinary Journal of Modern Science*, 23(2023), 17–25.
- Challoumis, C. (2024a). Approach on arm's length principle and fix length principle mathematical representations. In *Innovations and Contemporary Trends in Business & Economics*.
- Challoumis, C. (2024b). Estimations of the cycle of money without escape savings. *International Journal of Multicultural and Multireligious Understanding*, 11(3).
- Challoumis, C. (2024c). Impact Factors of Global Tax Revenue - Theory of Cycle of Money. *International Journal of Multicultural and Multireligious Understanding*, 11(1).
- Challoumis, C. (2024d). Minimum escaped savings and financial liquidity in mathematical representation. *Ekonomski Signali*, 19(1).
- Challoumis, C. (2024e). Rewarding taxes on the cycle of money. In *Social and Economic Studies within the Framework of Emerging Global Developments* (Vol. 5).
- Challoumis, C. (2024f). Rewarding taxes on the economy (The theory of cycle of money). *International Journal of Multicultural and Multireligious Understanding (IJMMU)*, 11(3).
- Challoumis, C. (2024g). Synopsis of principles for the authorities and controlled transactions. *Pindus*.

- Challoumis, C. (2024h). The cycle of money - Escape savings and the minimum financial liquidity. *International Journal of Multicultural and Multireligious Understanding (IJMMU)*, 11(4).
- Challoumis, C. (2024i). The cycle of money - Minimum escape savings and financial liquidity. *International Journal of Multicultural and Multireligious Understanding (IJMMU)*, 11(5).
- Challoumis, C. (2024j). The impact factor of Tangibles and Intangibles of controlled transactions on economic performance. *Economic Alternatives*.
- Challoumis, C. (2024k). THE INFLATION ACCORDING TO THE CYCLE OF MONEY (C.M.). *Economic Alternatives*.
- Challoumis, C. (2024l). Velocity of the escaped savings and financial liquidity on maximum mixed savings. *Open Journal for Research in Economics*, 7(1).
- Challoumis, C. (2024m). Velocity of the escaped savings and financial liquidity on minimum mixed savings. *Open Journal for Research in Economics*, 7(2).
- Challoumis, C. (2024n). Velocity of the escaped savings and financial liquidity on mixed savings. *Open Journal for Research in Economics*, 7(2).
- Challoumis, C., & Savic, M. (2024). Rational and Behavioral economics. *Ekonomski Signali*, 19(1).
- Dancygier, R. M., & Laitin, D. D. (2014). Immigration into Europe: Economic discrimination, violence, and public policy. *Annual Review of Political Science*, 17. <https://doi.org/10.1146/annurev-polisci-082012-115925>
- Dollery, B. E., & Worthington, A. C. (1996). The Evaluation of Public Policy: Normative Economic Theories of Government Failure. *Journal of Interdisciplinary Economics*, 7(1). <https://doi.org/10.1177/02601079x9600700103>
- dos Santos Benso Maciel, L., Bonatto, B. D., Arango, H., & Arango, L. G. (2020). Evaluating public policies for fair social tariffs of electricity in Brazil by using an economic market model. *Energies*, 13(18). <https://doi.org/10.3390/en13184811>
- Ewert, B., Loer, K., & Thomann, E. (2021). Beyond nudge: advancing the state-of-the-art of behavioural public policy and administration. *Policy and Politics*, 49(1). <https://doi.org/10.1332/030557320X15987279194319>
- Fan, Y., Yang, S., & Jia, P. (2020). Preferential Tax Policies: An Invisible Hand behind Preparedness for Public Health Emergencies. *International Journal of Health Policy and Management*. <https://doi.org/10.34172/ijhpm.2020.139>
- Fronzaglia, M. L., de Moura Júnior, Á. A., Racy, J. C., & Vartanian, P. R. (2019). Possible Effects of Economic Public Policies Implemented in Brazil after the Financial Crisis of 2008 on Foreign Direct Investment. *Theoretical Economics Letters*, 09(08). <https://doi.org/10.4236/tel.2019.98176>
- Grabs, J., Auld, G., & Cashore, B. (2020). Private regulation, public policy, and the perils of adverse ontological selection. *Regulation and Governance*. <https://doi.org/10.1111/rego.12354>
- Guardino, M., & Mettler, S. (2020). Revealing the "Hidden welfare state": How policy information influences public attitudes about tax expenditures. *Journal of Behavioral Public Administration*, 3(1). <https://doi.org/10.30636/jbpa.31.108>

- Haigh, Y. (2020). Increasing complexities: Teaching public policy in the age of discontent. *Teaching Public Administration*, 38(1). <https://doi.org/10.1177/0144739419879483>
- Hasselmann, L., & Stoker, G. (2017). Market-based governance and water management: the limits to economic rationalism in public policy. *Policy Studies*, 38(5). <https://doi.org/10.1080/01442872.2017.1360437>
- Hausman, D., McPherson, M., & Satz, D. (2016). Economic Analysis, Moral Philosophy, and Public Policy. In *Economic Analysis, Moral Philosophy, and Public Policy*. <https://doi.org/10.1017/9781316663011>
- Islam, A., Rashid, M. H. U., Hossain, S. Z., & Hashmi, R. (2020). Public policies and tax evasion: evidence from SAARC countries. *Heliyon*, 6(11). <https://doi.org/10.1016/j.heliyon.2020.e05449>
- Jensen, P. H. (2020). Experiments and evaluation of public policies: Methods, implementation, and challenges. *Australian Journal of Public Administration*, 79(2). <https://doi.org/10.1111/1467-8500.12406>
- Jeon, J., Kim, S., & Kwon, S. M. (2020). The effects of urban containment policies on public health. *International Journal of Environmental Research and Public Health*, 17(9). <https://doi.org/10.3390/ijerph17093275>
- John, P. (2018). Theories of policy change and variation reconsidered: a prospectus for the political economy of public policy. *Policy Sciences*, 51(1). <https://doi.org/10.1007/s11077-017-9297-x>
- Kalambokidis, L. (2014). Creating public value with tax and spending policies: The view from public economics. *Public Administration Review*, 74(4). <https://doi.org/10.1111/puar.12162>
- Kananen, J. (2012). International ideas versus national traditions: Nordic economic and public policy as proposed by the OECD. *Journal of Political Power*, 5(3). <https://doi.org/10.1080/2158379X.2012.735118>
- Kiktenko, O. V. (2020). ECONOMIC FEATURES OF PUBLIC POLICY IMPLEMENTATION IN THE EDUCATION SYSTEM. *State and Regions. Series: Economics and Business*, 2 (113). <https://doi.org/10.32840/1814-1161/2020-2-30>
- Kreft, S. F., & Sobel, R. S. (2005). Public policy, entrepreneurship, and economic freedom. In *Cato Journal* (Vol. 25, Issue 3).
- Ladvocat, M., & Lucas, V. (2019). REGIONAL DISPARITIES, PUBLIC POLICIES AND ECONOMIC GROWTH IN BRAZIL. *Revista Baru - Revista Brasileira de Assuntos Regionais e Urbanos*, 5(2). <https://doi.org/10.18224/baru.v5i2.7687>
- Laplaine, A., & Mazzucato, M. (2020). Socializing the risks and rewards of public investments: Economic, policy, and legal issues. *Research Policy: X*, 2. <https://doi.org/10.1016/j.repolx.2020.100008>
- Leckel, A., Veilleux, S., & Dana, L. P. (2020). Local Open Innovation: A means for public policy to increase collaboration for innovation in SMEs. *Technological Forecasting and Social Change*, 153. <https://doi.org/10.1016/j.techfore.2019.119891>

- Mackean, T., Fisher, M., Friel, S., & Baum, F. (2020). A framework to assess cultural safety in Australian public policy. *Health Promotion International*, 35(2). <https://doi.org/10.1093/HEAPRO/DAZ011>
- Maestre-Andrés, S., Drews, S., & van den Bergh, J. (2019). Perceived fairness and public acceptability of carbon pricing: a review of the literature. *Climate Policy*, 19(9). <https://doi.org/10.1080/14693062.2019.1639490>
- Mancuso, W. P., & Moreira, D. C. (2013). Tax benefits: Are they worth it? A study of public policies formulation. *Revista de Sociologia e Política*, 21(45). <https://doi.org/10.1590/S0104-44782013000100009>
- Menguy, S. (2020). Tax competition, fiscal policy, and public debt levels in a monetary union. *Journal of Economic Integration*, 35(3). <https://doi.org/10.11130/jei.2020.35.3.353>
- Mohindra, K. S. (2007). Healthy public policy in poor countries: Tackling macro-economic policies. In *Health Promotion International* (Vol. 22, Issue 2). <https://doi.org/10.1093/heapro/dam008>
- Muñoz, O. G., & Flores, M. C. (2020). Basic principles of economic policy and public decision in the 21st century. *Journal of Social Sciences (COES&RJ-JSS)*, 9(1). <https://doi.org/10.25255/jss.2020.9.1.21.31>
- Ng, Y. K. (2018). Ten rules for public economic policy. *Economic Analysis and Policy*, 58. <https://doi.org/10.1016/j.eap.2018.01.002>
- Oueslati, W. (2015). Growth and welfare effects of environmental tax reform and public spending policy. *Economic Modelling*, 45. <https://doi.org/10.1016/j.econmod.2014.10.040>
- Reeves, P., Edmunds, K., Searles, A., & Wiggers, J. (2019). Economic evaluations of public health implementation-interventions: a systematic review and guideline for practice. In *Public Health* (Vol. 169). <https://doi.org/10.1016/j.puhe.2019.01.012>
- Rizzo, I., & Throsby, D. (2006). Chapter 28 Cultural Heritage: Economic Analysis and Public Policy. In *Handbook of the Economics of Art and Culture* (Vol. 1). [https://doi.org/10.1016/S1574-0676\(06\)01028-3](https://doi.org/10.1016/S1574-0676(06)01028-3)
- Saleem, M., Prot, S., Anderson, C. A., & Lemieux, A. F. (2017). Exposure to Muslims in Media and Support for Public Policies Harming Muslims. *Communication Research*, 44(6). <https://doi.org/10.1177/0093650215619214>
- Sánchez, J. M., Rodríguez, J. P., & Espitia, H. E. (2020). Review of artificial intelligence applied in decision-making processes in agricultural public policy. In *Processes* (Vol. 8, Issue 11). <https://doi.org/10.3390/pr8111374>
- Scholvin, S., & Malamud, A. (2020). Is Brazil a Geoeconomic Node? Geography, Public Policy, and the Failure of Economic Integration in South America. *Brazilian Political Science Review*, 14(2). <https://doi.org/10.1590/1981-3821202000020004>
- Shamah-Levy, T., Romero-Martínez, M., Cuevas-Nasu, L., Gómez-Humaran, I. M., Avila-Arcos, M. A., & Rivera-Dommarco, J. A. (2019). The Mexican national health and nutrition survey as a basis for public policy planning: Overweight and obesity. *Nutrients*, 11(8). <https://doi.org/10.3390/nu11081727>

- Smętkowski, M., Moore-Cherry, N., & Celińska-Janowicz, D. (2020). Spatial transformation, public policy and metropolitan governance: secondary business districts in Dublin and Warsaw. *European Planning Studies*. <https://doi.org/10.1080/09654313.2020.1856346>
- Snow, M. S. (1988). Telecommunications literature. A critical review of the economic, technological and public policy issues. *Telecommunications Policy*, 12(2). [https://doi.org/10.1016/0308-5961\(88\)90007-9](https://doi.org/10.1016/0308-5961(88)90007-9)
- Spiel, C., Schober, B., & Strohmeier, D. (2018). Implementing intervention research into public policy – the “I3-approach.” *Prevention Science*, 19(3). <https://doi.org/10.1007/s11121-016-0638-3>
- Tummers, L. (2019). Public Policy and Behavior Change. *Public Administration Review*, 79(6). <https://doi.org/10.1111/puar.13109>
- Turner, A. (2010). The crisis, conventional economic wisdom, and public policy. *Industrial and Corporate Change*, 19(5). <https://doi.org/10.1093/icc/dtq042>
- Ustinovich, E., & Kulikov, M. (2020). National projects, socio-economic policy and public equilibrium. *Social'naja Politika i Social'noe Partnerstvo (Social Policy and Social Partnership)*, 6. <https://doi.org/10.33920/pol-01-2006-01>
- Williamson, A. K., & Luke, B. (2020). Agenda-setting and Public Policy in Private Foundations. *Nonprofit Policy Forum*, 11(1). <https://doi.org/10.1515/npf-2019-0049>