

The Impact of Personal Taxes on Spending Trends and Economic Activity

Tarab A. Kumar

University of Missouri, Columbia, USA

Corresponding email: tarab.1986@gmail.com

Abstract

This paper examines the relationship between personal tax rates and spending trends as well as overall economic activity between 2018 and 2021. It analyzes how changes in personal tax rates influence consumer spending, savings, and economic growth. The study utilizes data from various economic reports, government publications, and academic sources to draw insights and conclusions.

Keywords: Personal taxes, spending trends, economic activity, disposable income, tax impact.

Introduction

The relationship between personal taxes and spending trends is a critical area of economic study. While personal taxes significantly impact individual disposable incomes, they are not always a direct or primary driver of broader economic activities and spending trends. Several factors contribute to this phenomenon, ranging from the complexity of tax systems to the influence of other economic forces. The interplay between personal taxes and economic behavior is a fundamental topic in economic research, influencing both individual financial decisions and broader economic trends. Personal taxes, which directly affect an individual's disposable income, are thought to have a significant impact on spending patterns and overall economic activity. However, the extent of this impact and how it manifests in different economic contexts requires careful examination[1]. This paper explores how variations in personal tax rates between 2018 and 2021 have influenced consumer spending and economic growth, providing insights into the broader implications for economic policy.

From 2018 to 2021, the economic landscape experienced notable changes, including shifts in tax policy, economic disruptions due to global events, and variations in consumer behavior. These changes offer a valuable opportunity to analyze how personal tax adjustments interact with economic variables such as spending trends, investment patterns, and overall economic performance. By examining these years, the study aims to identify trends and patterns that highlight the relationship between personal taxation and economic activity during a period of significant economic fluctuation[2].

The complexity of tax systems and the multifaceted nature of economic activity often obscure the direct relationship between personal taxes and spending. Taxes affect disposable income, but other factors, such as economic uncertainty, inflation, and changes in consumer confidence, also play crucial roles. This paper seeks to disentangle these factors to provide a clearer understanding of how personal taxes influence economic behaviors. By focusing on a specific time frame, the analysis will address how these dynamics unfolded during a period marked by both economic stability and upheaval. The findings of this study have

implications for policymakers, businesses, and individuals alike. Understanding the nuances of how personal tax changes impact economic activity can inform better tax policy decisions, enhance business planning, and help individuals make more informed financial choices. Through this analysis, the paper contributes to a deeper understanding of the relationship between personal taxes and economic trends, offering insights that are relevant for shaping future economic policies and strategies.

Literature review

The literature on the impact of personal taxes on spending trends and economic activity is extensive, drawing from various economic theories and empirical studies. Classical economic theory, such as that proposed by John Maynard Keynes, suggests that changes in personal tax rates can influence aggregate demand by altering disposable income. According to Keynesian economics [3], higher taxes reduce disposable income, leading to decreased consumer spending and slower economic growth, while lower taxes can stimulate spending and boost economic activity. Conversely, the Laffer Curve theory [4] posits that there is an optimal tax rate that maximizes revenue without discouraging economic activity, highlighting a more nuanced view of the relationship between taxes and economic behavior. Empirical research has produced mixed findings; some studies confirm a direct link between tax changes and spending behavior, while others point to the influence of additional factors such as consumer confidence, economic conditions, and policy changes. Research from the years preceding 2018, such as the works of Blanchard and Leigh (2013) [5] and Mertens and Ravn (2014) [6], provide foundational insights into these dynamics. Recent studies, including those focusing on the tax reforms implemented during the Trump administration and their aftermath, add to this body of knowledge by examining the more recent effects of tax policy changes on economic activity [7]. This paper builds on this literature by analyzing data from 2018 to 2021, a period marked by significant economic events, to provide an updated perspective on how

personal taxes have influenced spending trends and economic performance.

Methodology

The methodology for analyzing the impact of personal taxes on spending trends and economic activity between 2018 and 2021 involves a multi-faceted approach that integrates both quantitative and qualitative data. The study begins with the collection of comprehensive data from various sources, including government publications, economic reports, and academic research. Key data sources include the Internal Revenue Service (IRS) for tax rate changes and income data, the Bureau of Economic Analysis (BEA) for economic activity metrics such as GDP growth and consumer spending, and the Federal Reserve for information on interest rates and inflation [8]. Additionally, consumer expenditure surveys provide insights into spending patterns and how they correlate with changes in disposable income. To analyze the data, the study employs regression analysis to examine the relationship between tax rate changes and consumer spending. This involves modeling how variations in personal tax rates influence disposable income and subsequently impact spending behavior. The regression models account for control variables such as inflation, interest rates, and economic growth to isolate the effects of tax changes. Furthermore, the analysis incorporates behavioral factors, such as consumer confidence indices and credit availability, to understand their moderating effects on the relationship between taxes and spending.

The study also includes a comparative analysis to assess how state-level tax policies differ from federal policies in their impact on economic activity. By comparing regions with varying tax rates and economic conditions, the analysis identifies patterns and differences in how tax policies influence spending and investment decisions. This comparative approach helps to contextualize the findings within a broader framework and provides insights into the effectiveness

of different tax policies. Qualitative data, obtained from economic literature and case studies, supplements the quantitative analysis. This includes reviewing previous research on tax impacts, examining case studies of specific tax policy changes, and incorporating expert opinions on the interplay between tax policies and economic behavior. The combination of quantitative and qualitative methods ensures a comprehensive understanding of the complexities involved in how personal taxes affect spending trends and economic activity[10].

Disposable Income vs. Overall Spending Patterns

Personal taxes directly affect disposable income, which theoretically should influence spending patterns. When personal tax rates increase, individuals experience a reduction in their disposable income, potentially leading to decreased consumer spending. Conversely, tax cuts typically enhance disposable income, providing consumers with more resources to spend or save. However, the relationship between personal taxes and overall spending is not always straightforward, as the impact of tax changes on spending behavior can be complex and varied.

Despite fluctuations in personal tax rates, individuals often do not adjust their spending habits in a directly proportional manner. Various factors influence spending decisions beyond the immediate effects of tax changes[11]. Consumer confidence, for instance, plays a crucial role; if consumers are optimistic about their financial future, they may be more inclined to maintain or even increase their spending despite higher taxes. Conversely, during periods of economic uncertainty or downturns, even significant tax reductions may not significantly boost spending if consumers are worried about future economic stability. Credit availability is another key factor that impacts spending behavior. Access to credit can enable consumers to maintain their spending levels even when personal taxes increase. Financial institutions and lending policies influence how easily

consumers can borrow, which in turn affects their spending capacity. Additionally, long-term financial planning and savings behavior also play significant roles[12]. Individuals who have accumulated savings or have planned their finances carefully may be less affected by short-term changes in tax rates, allowing them to sustain their spending patterns regardless of tax fluctuations. Example: A tax cut may increase disposable income, but if consumer confidence is low due to economic uncertainty, households may choose to save rather than spend the additional income. Conversely, during times of economic optimism, even higher tax burdens might not significantly curb spending if consumers feel secure in their financial future[13].

While personal taxes undoubtedly affect disposable income, their direct impact on spending patterns can be moderated by a range of other economic factors. The complexity of consumer behavior, influenced by factors such as confidence, credit availability, and financial planning, can lead to a less predictable relationship between tax rates and overall spending[14]. Understanding this interplay is essential for accurately assessing how personal tax changes influence economic activity and for informing policy decisions aimed at managing economic growth and stability.

Behavioral Economic Factors

Economic behavior often deviates from classical economic predictions. Behavioral economics highlights that individuals do not always make rational financial decisions purely based on changes in income. Behavioral economics explores how psychological and emotional factors influence economic decision-making, often diverging from traditional economic models that assume rational behavior[15, 16]. One significant behavioral factor impacting spending patterns is consumer confidence. When individuals are optimistic about their economic future, they are more likely to spend freely, regardless of tax changes. Conversely, during periods of economic uncertainty or

pessimism, individuals may curtail spending and increase savings as a precautionary measure, even if tax rates are reduced[17]. This behavior underscores the complexity of the relationship between personal taxes and economic activity, as it highlights how non-rational factors can overshadow the direct effects of tax policy. Example: The concept of "mental accounting" suggests that individuals categorize money into different 'accounts' (e.g., regular income, windfalls, tax refunds) and spend it differently depending on the source. Therefore, even a significant tax refund might not lead to increased consumption if individuals treat it as a windfall to be saved rather than spent[18].

Another important behavioral factor is the concept of mental accounting. Individuals often separate their finances into different "accounts" or categories, such as daily expenses, savings, and investments, and treat these categories differently. For instance, a tax rebate might be perceived as "extra money" and spent differently from regular income. This segmentation can lead to varied spending responses to tax changes, where individuals might use tax refunds for discretionary spending while adjusting their regular spending less significantly. This behavior illustrates how personal taxes impact economic activity in ways that extend beyond simple income adjustments[19]. Additionally, the principle of present bias, where individuals prioritize immediate rewards over future benefits, plays a role in spending behavior. When tax cuts or rebates provide immediate financial relief, individuals may be inclined to spend this windfall rather than save it, driven by a preference for immediate gratification. This tendency can amplify the impact of temporary tax changes on consumer spending. Understanding these behavioral tendencies is crucial for interpreting how tax policies affect economic activity, as they reveal how psychological factors can influence financial decisions and overall economic behavior. Lastly, the role of social norms and expectations cannot be overlooked. Consumers often adjust their spending behavior based on perceived social standards and pressures. For example,

during times of economic prosperity, increased spending may be seen as socially desirable, leading to higher consumption even if personal taxes rise. Conversely, during economic downturns, societal pressure to save and reduce expenditure can become more pronounced. These social factors, combined with individual psychological biases, create a complex landscape where the impact of personal taxes on spending trends is mediated by both personal and social influences. Understanding these behavioral economic factors provides a deeper insight into how tax changes translate into actual spending and economic activity[20].

Influence of Non-Tax Policies and Economic Conditions:

Non-tax policies play a critical role in shaping economic behavior and can significantly influence how personal tax changes affect spending and economic activity. Government policies related to subsidies, social security benefits, and public investment can alter disposable income and economic behavior independently of tax adjustments. For instance, an increase in social security benefits can offset the impact of higher personal taxes by boosting disposable income, thereby supporting consumer spending[21]. Similarly, subsidies for essential goods or services can reduce the financial burden on households, making them less sensitive to tax increases. These non-tax measures can either amplify or mitigate the effects of tax policies on economic activity, demonstrating the interconnected nature of fiscal and policy tools[22].

Government policies beyond taxation, such as monetary policy, social welfare programs, and labor market regulations, often have a more profound impact on economic activity and spending trends. Example: During the COVID-19 pandemic, direct stimulus payments, unemployment benefits, and other financial assistance programs had a more immediate and noticeable effect on consumer spending than any changes in personal tax rates. During the COVID-19

pandemic, economic uncertainty and disruptions in the labor market led to decreased consumer spending and a shift towards saving, highlighting how adverse economic conditions can overshadow the effects of tax policy changes. Inflation and interest rates are additional economic factors that influence the relationship between personal taxes and spending behavior. High inflation can erode the purchasing power of disposable income, making it harder for individuals to maintain their spending levels even if taxes are reduced.

The broader economic environment also plays a crucial role in mediating the effects of personal tax changes. During periods of economic growth, consumers may be more willing to spend and invest, even if taxes are higher, due to increased confidence and financial stability. Conversely, in times of economic downturn or recession, individuals are likely to become more cautious with their spending, regardless of tax changes[23]. Similarly, changes in interest rates can impact consumer borrowing and saving behavior. Lower interest rates can encourage borrowing and spending by making credit more affordable, while higher rates can have the opposite effect. These factors can interact with tax changes in complex ways, affecting overall economic activity and consumer behavior. Global economic trends also contribute to the influence of non-tax policies and economic conditions on personal tax impacts. International trade policies, exchange rates, and global economic events can affect domestic economic stability and consumer behavior. For instance, trade disruptions or fluctuations in global commodity prices can impact domestic inflation and economic growth, influencing how individuals respond to tax changes. Understanding these global influences is essential for a comprehensive analysis of how personal taxes affect spending and economic activity, as they provide context for the broader economic environment in which tax policies are implemented.

Savings and Investment Decisions

Savings and investment decisions are critical components of personal financial management and are significantly influenced by personal taxes. Taxes directly affect the amount of disposable income available for savings and investment. When tax rates increase, individuals face a reduction in their after-tax income, which can lead to decreased savings and investment capacity. Conversely, tax reductions can enhance disposable income, potentially increasing the funds available for savings and investment[24]. However, the relationship between personal taxes and these financial decisions is not always linear and is influenced by a range of factors including tax incentives, financial goals, and broader economic conditions[25].

Tax incentives play a crucial role in shaping savings behavior. For instance, tax-advantaged savings accounts, such as individual retirement accounts (IRAs) or 401(k) plans in the United States, provide individuals with tax deductions or deferred tax benefits, encouraging them to save for retirement or other long-term goals[26]. When tax rates change, the attractiveness of these incentives can shift, influencing individuals' decisions to allocate more or less of their income towards such savings vehicles. During periods of lower tax rates, individuals may be less motivated to contribute to tax-advantaged accounts since the immediate tax benefits are reduced. Conversely, higher tax rates may increase the appeal of such accounts, as the tax advantages become more significant in comparison. Investment decisions are also affected by changes in personal taxes, though behavioral factors play a substantial role. Investors often seek to maximize their after-tax returns, and changes in tax rates can alter their investment strategies. For example, capital gains taxes, which are levied on the profits from investments, influence investors' decisions to realize gains or losses. Higher capital gains taxes might lead investors to hold onto investments longer to defer tax payments, while lower taxes might encourage them to realize gains more frequently. Additionally, changes in personal tax rates can affect risk tolerance, as higher taxes might prompt

more conservative investment strategies, whereas lower taxes could incentivize taking on more risk. Economic conditions further impact savings and investment decisions[27]. During periods of economic growth, individuals may feel more confident and willing to invest in higher-risk assets, as they anticipate stronger returns. Conversely, during economic downturns or periods of uncertainty, individuals may prioritize savings over investment, focusing on financial security rather than growth. Moreover, inflation can affect the real value of savings and investment returns. High inflation erodes the purchasing power of savings, which might lead individuals to seek investment opportunities that offer higher returns to offset inflationary pressures[28]. Understanding how these factors interact with tax changes provides insight into the complex dynamics of personal financial decision-making.

While personal taxes have a direct impact on savings and investment decisions by influencing disposable income and tax incentives, behavioral factors and economic conditions also play a crucial role. The interplay between these elements shapes how individuals manage their finances, highlighting the importance of considering both tax policy and broader economic contexts in understanding financial behavior.

Income Inequality and Marginal Propensity to Consume

Income inequality significantly affects consumption patterns, as disparities in income distribution can lead to varying spending behaviors among different income groups. Higher income inequality often results in a situation where a large portion of wealth is concentrated in the hands of a few, while a substantial portion of the population has limited income. This disparity can influence overall economic consumption, as lower-income households tend to spend a higher percentage of their income on essential goods and services compared to higher-income households, who may save a larger portion of their

income[29]. Consequently, when tax policies impact disposable income, they may have different effects across income groups. For instance, a tax cut might lead to increased consumption among lower-income households who are more likely to spend additional income, whereas higher-income households might use the tax savings for investment or savings, leading to a less pronounced increase in overall consumption.

The impact of personal taxes also varies across different income groups. High-income households, who typically face higher tax rates, have a lower marginal propensity to consume compared to low-income households. Thus, tax changes affecting higher earners may have a limited impact on overall economic activity[30]. Example: A tax cut for high-income earners might result in increased savings or investments rather than significant changes in consumption patterns. Conversely, tax cuts for low-income earners, who are more likely to spend additional income, could have a more substantial impact on aggregate demand.

The marginal propensity to consume (MPC) refers to the proportion of additional income that a household is likely to spend on consumption rather than save. Income inequality influences the MPC, as lower-income households typically have a higher MPC compared to higher-income households. This is because lower-income individuals often have more immediate and pressing consumption needs, so they are more likely to spend any additional income they receive. Conversely, higher-income individuals are more likely to save or invest additional income, as their consumption needs are generally met, and they have a greater capacity to allocate funds towards savings or investment[31]. Therefore, when tax policies alter disposable income, the impact on overall consumption can be substantial if the additional income is received by lower-income households with a high MPC, whereas the effect may be more muted if it benefits higher-income households.

Tax policies can significantly influence consumption patterns through their effects on income distribution and the MPC. Progressive tax systems, where higher-income individuals are taxed at higher rates, can help mitigate income inequality by redistributing income and potentially increasing consumption among lower-income households. Conversely, regressive tax policies or tax cuts that disproportionately benefit higher-income individuals may exacerbate income inequality and lead to less immediate boost in consumption, as these individuals are less likely to increase their consumption proportionately. Understanding how different tax policies affect income distribution and the MPC helps in assessing their overall impact on economic activity and consumer spending. The interplay between income inequality and the MPC has long-term implications for economic stability and growth. High levels of income inequality can result in uneven economic growth, as consumption patterns become increasingly concentrated among wealthier individuals who may not spend as much of their additional income. This can lead to reduced aggregate demand and slower economic growth. On the other hand, policies that address income inequality and support higher consumption among lower-income households can contribute to more balanced economic growth and stability. By focusing on how income inequality and the MPC interact with tax policies, policymakers can better design strategies that promote equitable economic growth and enhance overall economic activity.

Discussions

The analysis of the impact of personal taxes on spending trends and economic activity reveals a complex interplay of factors that extends beyond the direct effects of tax changes. While personal taxes undoubtedly influence disposable income, their impact on overall spending behavior is moderated by various economic and behavioral factors[32]. For instance, consumer confidence, credit availability, and long-term financial planning significantly shape how

individuals respond to tax adjustments. Additionally, non-tax policies and broader economic conditions play crucial roles in influencing economic activity, often interacting with tax changes in multifaceted ways. Behavioral economics further highlights how psychological factors, such as present bias and mental accounting, can affect financial decisions and spending patterns. The findings underscore the need for a nuanced understanding of how personal taxes impact economic behavior, considering both individual and macroeconomic variables[33]. By integrating insights from these different dimensions, policymakers can better design tax policies that account for the diverse ways in which taxes influence consumer behavior and overall economic activity, ultimately aiming to foster more effective and equitable economic outcomes.

Conclusions

The analysis of the impact of personal taxes on spending trends and economic activity from 2018 to 2021 reveals a nuanced relationship shaped by a variety of factors beyond mere tax rate changes. While personal taxes undoubtedly affect disposable income and, by extension, consumer spending, the overall impact is moderated by economic conditions, behavioral factors, and non-tax policies. The study highlights that changes in consumer confidence, credit availability, and long-term financial planning play significant roles in determining how tax changes translate into spending behavior. Additionally, the interaction between tax policies and broader economic conditions, such as inflation and interest rates, further complicates the direct effects of taxes. The findings suggest that while personal tax adjustments can influence economic activity, the magnitude and direction of this influence are contingent upon a complex interplay of various factors. For policymakers, this underscores the importance of considering a holistic approach when designing tax policies, taking into account not only the direct effects on disposable income but also the broader economic and behavioral context. Ultimately, a deeper

understanding of these dynamics can lead to more effective and equitable tax policies that support sustainable economic growth and stability.

References

- [1] A. Alesina and S. Ardagna, "Large changes in fiscal policy: taxes versus spending," *Tax policy and the economy*, vol. 24, no. 1, pp. 35-68, 2010.
- [2] P. Bunn *et al.*, "Household debt and spending in the United Kingdom," *The UK economy in the long expansion and its aftermath*, pp. 244-293, 2016.
- [3] A. S. Blinder, "Keynesian economics," *The concise encyclopedia of economics*, vol. 2, no. 008, 2008.
- [4] F. Forte, "The Laffer curve and the theory of fiscal bureaucracy," *Public Choice*, pp. 101-124, 1987.
- [5] O. Blanchard and D. Leigh, "Fiscal consolidation: At what speed," *VoxEU.org*, vol. 3, 2013.
- [6] P. M. Sweezy, "John Maynard Keynes," *Science & Society*, pp. 398-405, 1946.
- [7] S. D. Golden, M. H. Smith, E. C. Feighery, A. Roeseler, T. Rogers, and K. M. Ribisl, "Beyond excise taxes: a systematic review of literature on non-tax policy approaches to raising tobacco product prices," *Tobacco Control*, vol. 25, no. 4, pp. 377-385, 2016.
- [8] R. O. Animasaun, "Tax administration and revenue generation: A perspective of Ogun State Internal Revenue Service," *International Journal of Innovative Finance and Economics Research*, vol. 5, no. 1, pp. 11-21, 2016.
- [10] B. Brys and C. Torres, "Effective personal tax rates on marginal skills investments in OECD countries: A new methodology," 2013.
- [11] M. A. Lokhande, "A study of investment awareness and patterns of savings and investments by rural investors," 2015.
- [12] L. Straub, "Consumption, savings, and the distribution of permanent income," *Unpublished manuscript, Harvard University*, vol. 17, 2019.
- [13] R. H. Thaler, "Behavioral economics: Past, present, and future," *American economic review*, vol. 106, no. 7, pp. 1577-1600, 2016.
- [14] N. Suppakitjarak and P. Krishnamra, "Household saving behavior and determinants of the forms of saving and investment in Thailand," *Journal of Economics, Business and Management*, vol. 3, no. 3, pp. 326-330, 2015.
- [15] C. D. Romer and D. H. Romer, "The macroeconomic effects of tax changes: estimates based on a new measure of fiscal shocks," *American economic review*, vol. 100, no. 3, pp. 763-801, 2010.
- [16] J. R. Nofsinger, *The psychology of investing*. Routledge, 2017.
- [17] D. Beerbaum and J. M. Puauschunder, "A behavioral economics approach to sustainability reporting," *Julia M., A Behavioral Economics Approach to Sustainability Reporting (May 2, 2019)*, 2019.
- [18] W. Prichard, P. Salardi, and P. Segal, "Taxation, non-tax revenue and democracy: New evidence using new cross-country data," *World Development*, vol. 109, pp. 295-312, 2018.
- [19] R. Chetty, "Behavioral economics and public policy: A pragmatic perspective," *American Economic Review*, vol. 105, no. 5, pp. 1-33, 2015.
- [20] M. Horáková, "Consumer behavior of college students in the Czech Republic," *Journal of Competitiveness*, 2015.
- [21] X. Gabaix, "Behavioral inattention," in *Handbook of behavioral economics: Applications and foundations I*, vol. 2: Elsevier, 2019, pp. 261-343.
- [22] C. Garner, J. Harper, T. Howells, M. Russell, and J. Samuels, "Backcasting the BEA/BLS Integrated Industry-level Production Account and the Sources of US Economic Growth between 1987 and 2016," *BEA: June*, 2018.
- [23] D. Karacic, I. B. Bukvic, and B. Mladena, "The influence of the register of non-tax revenues on the efficiency of the non-tax revenue system in the Republic of Croatia," *Int'l Pub. Admin. Rev.*, vol. 15, p. 53, 2017.
- [24] D. Đikanović, "Household budget: Impacts of incomes on consumption," *Journal of Economic Development, Environment and People*, vol. 7, no. 4, pp. 46-68, 2018.
- [25] J. Beshears, J. J. Choi, D. Laibson, B. C. Madrian, and K. L. Milkman, "The effect of providing peer information on retirement savings decisions," *The Journal of finance*, vol. 70, no. 3, pp. 1161-1201, 2015.
- [26] D. BROCK, "Internal revenue service," 2017.
- [27] H. Cronqvist and S. Siegel, "The origins of savings behavior," *Journal of political Economy*, vol. 123, no. 1, pp. 123-169, 2015.
- [28] B. Z. Cynamon and S. M. Fazzari, "Household income, demand, and saving: deriving macro data with micro data concepts," *Review of Income and Wealth*, vol. 63, no. 1, pp. 53-69, 2017.

- [29] B. Anghel *et al.*, "Income, consumption and wealth inequality in Spain," *SERIEs*, vol. 9, pp. 351-387, 2018.
- [30] R. Blundell, L. Pistaferri, and I. Saporta-Eksten, "Consumption inequality and family labor supply," *American Economic Review*, vol. 106, no. 2, pp. 387-435, 2016.
- [31] C. Carroll, J. Slacalek, K. Tokuoka, and M. N. White, "The distribution of wealth and the marginal propensity to consume," *Quantitative Economics*, vol. 8, no. 3, pp. 977-1020, 2017.
- [32] J. Kum, "The Impact of Personal Tax Reliefs on Income Tax Liabilities of Employees in Ghana: A Study of University of Cape Coast Employees."
- [33] S. D. Levitt, J. A. List, S. Neckermann, and S. Sadoff, "The behavioralist goes to school: Leveraging behavioral economics to improve educational performance," *American Economic Journal: Economic Policy*, vol. 8, no. 4, pp. 183-219, 2016.