Analysis of the Impact of Athlete Income Tax Policy on the Achievement and Participation of Professional Tennis Athletes in Indonesia: A Local Regulation Perspective

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A R T I C L E I N F O

A B S T R A C T

This study analyzes the impact of Indonesia's income tax policy on professional tennis athletes' performance and participation, viewed from the perspective of regional regulations. The research examines the relationship between national tax rules and local sports development policies, focusing on concepts such as tax burden, athlete motivation, and regional incentives. Using literature review, regulatory analysis, and case studies from selected provinces with sports-related bylaws, data were observed through policy documents and local implementation cases. Results indicate that high tax burdens may lower athletes' net income and motivation, but regional support through bonuses, subsidies, and facilities can offset negative effects. Harmonizing national fiscal policies with local initiatives can sustain athlete development and enhance national sports performance.

INTRODUCTION

Over the past two decades, professional sports in Indonesia have experienced significant growth, with tennis emerging as one of the most rapidly developing disciplines (Weltbank, 2023). The improvement in competition quality, the increasing number of tournaments, and strong support from both the private sector and the government have been key drivers of this progress (Pemuda & Indonesia, 2022). Data from the Indonesian Lawn Tennis Association (PELTI) show that in 2023, approximately 18 official tournaments were held, consisting of 12 national and 6 international events. Tennis communities have also grown remarkably, from only four in 2020 to around 500 in 2024, reflecting a substantial expansion in participation.

Indonesian athletes are also making their mark on the global stage. For instance, Aldila Sutjiadi currently holds the WTA doubles ranking of No. 26, while Janice Tjen is ranked No. 148 in WTA singles as of August 2025 (Vo & Nguyen, 2025). A summary of recent developments in Indonesian professional tennis is presented in Table 1.

Table 1. Developments in Indonesian Professional Tennis

Indicator	Latest Data (2023–2025)	Source
Number of official PELTI tennis tournaments per year	±18 tournaments (12 national, 6 international)	PELTI (2023)
Growth of tennis communities (2020–2024)	From 4 communities to ±500 communities	PELTI (2024)
Aldila Sutjiadi's world ranking (WTA doubles)	No. 26	WTA (2025)
Janice Tjen's world ranking (WTA singles)	No. 148	WTA (2025)
International achievements	WTA doubles title, Grand Slam participation	Sports media, WTA

Alongside the professionalization and economic opportunities in tennis, there are fiscal consequences in the form of income tax obligations under the Indonesian tax law framework. The current tax regulations are governed by Law No. 28 of 2007 concerning the Third Amendment to Law No. 6 of 1983 on General Provisions and Tax Procedures (Indonesia, 2007), which establishes the legal foundation for income tax collection from all sources, including tournament prizes, sponsorship contracts, performance bonuses, exhibition fees, and other commercial activities of professional athletes.

While the policy aims to enhance state revenue and ensure fiscal equity, high tax burdens can reduce athletes' net income, potentially affecting their ability to fund training, equipment, and participation in tournaments. In this context, although local governments have no authority to regulate income tax rates, they can play a strategic role through regional regulations (Peraturan Daerah or Perda) by providing non-tax incentives such as performance bonuses, training subsidies, free or subsidized training facilities, and reduced local sports facility fees.

This study aims to analyze the relationship between the national income tax policy and regional government support in fostering professional tennis athletes in Indonesia. The findings are expected to contribute to the enrichment of knowledge on harmonizing central fiscal policies with local initiatives to ensure sustainable athlete development, maintain participation, and enhance national sports performance. (Byrne, B. M. 2013) Given the unique intersection of fiscal policy and sports management addressed in this research, the findings are particularly relevant for publication in sport management and public policy journals that focus on the economic aspects of professional athletics and policy implementation at multiple government levels.

LITERATURE REVIEW
Human Capital Theory

Human Capital Theory (Breuer et al 2021) states that investment in education, training, and skill development will increase individual productivity. In the context of professional sports, particularly tennis, athletes need to invest financial resources to obtain quality training, personal coaches, fitness programs, and adequate equipment. However, high national income tax policies have the potential to reduce athletes' net income, thereby limiting their ability to make such investments. This impact can directly decrease the quality of performance on the court due to limited access to performance-supporting resourcesH1: National income tax policy has a significant negative effect on the performance of professional tennis athletes in Indonesia.

Fiscal Federalism Theory

The division of fiscal responsibilities between central and regional governments. Income tax in Indonesia falls entirely under the authority of the central government, so regional governments cannot modify tax rates or collection mechanisms. Nevertheless, regional governments have room to issue compensatory policies through Regional Regulations (Perda) (Rukmana, n.d.), such as providing performance bonuses, training subsidies, free training facilities, or exemptions from local levies. This support can reduce the negative impact of tax burden and maintain stability in athlete performance. In other words, regional governments can serve as a balancing force for national fiscal policy in order to support the sustainability of athlete achievement.

The practical implementation of such regional support mechanisms has been documented in recent studies of Indonesian tennis organization management. (Hariyanto et al 2023) examined the management of organizational resources at the Indonesian Tennis Association in Semarang City, revealing the challenges faced by regional tennis organizations in allocating limited resources for athlete development. Their findings demonstrate that local tennis associations often struggle with resource constraints, making regional government support even more critical for sustaining athlete development programs. This organizational perspective reinforces the importance of coordinated fiscal policies that consider the resource limitations faced by sports organizations at the grassroots level.

H_2: *Regional government support moderates the relationship between national income tax policy and the performance of professional tennis athletes, reducing the negative impact of taxation.*

Motivation Theory

Motivation Theory (Deci & Ryan, 2013) emphasizes that motivation can be influenced by internal (intrinsic) and external (extrinsic) factors. For professional athletes, external support such as financial incentives, training facilities, and travel subsidies can maintain their enthusiasm to continue competing despite facing significant tax burdens. These incentives not only sustain participation in tournaments but also encourage active engagement in long-term training programs. Thus, regional government support can function as a motivational driver that maintains the sustainability of athlete participation at highly competitive levels.

H_3: *Regional government support moderates the relationship between national income tax policy and the participation of professional tennis athletes, sustaining competitive engagement.*

Based on these theories, this study positions National Income Tax Policy as the independent variable that influences the financial capacity of professional athletes. This financial capacity, in turn, affects Athlete Performance and Athlete Participation as dependent variables. Meanwhile, Regional Government Support serves as a moderating variable that can reduce the negative effects of tax policy on both dependent variables.
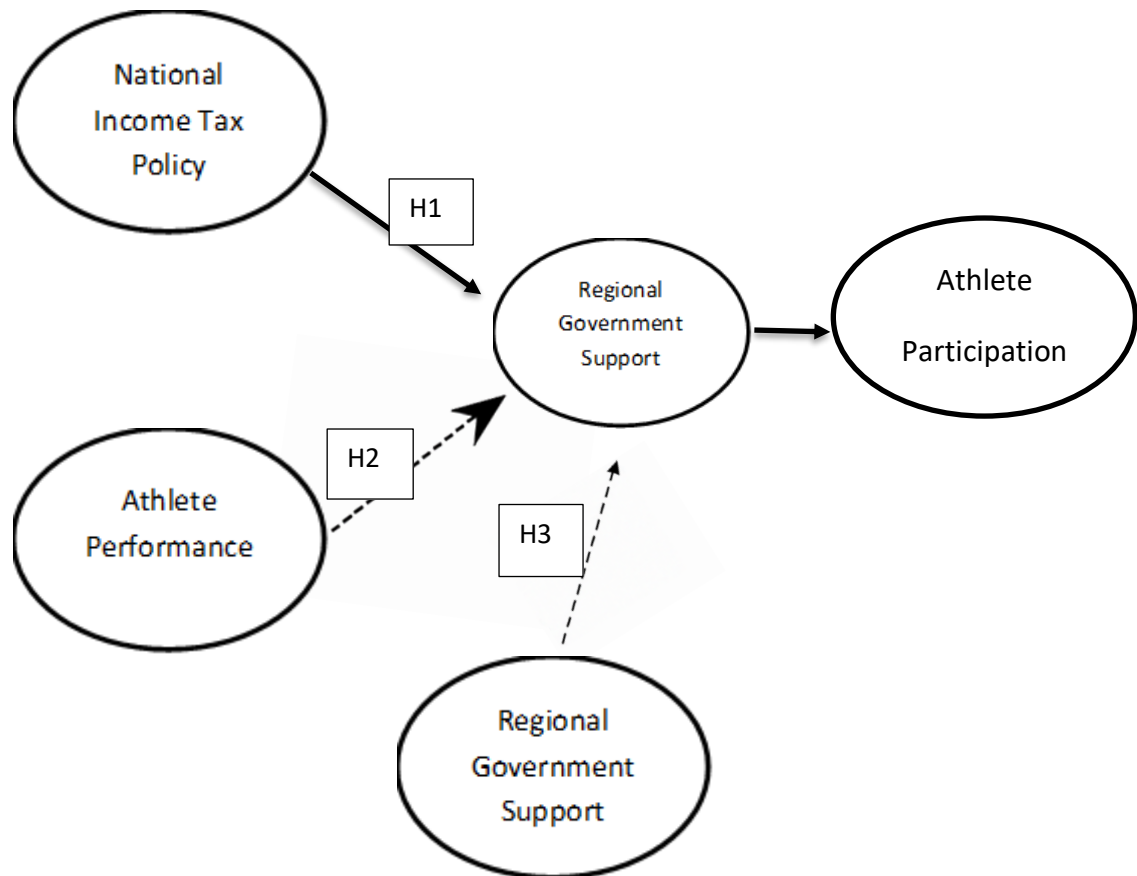
Figure 1. Conceptual Framework

H_1: *National income tax policy → Athlete Performance (negative relationship expected).*
H_2: *Regional government support moderates the effect of national income tax policy on athlete performance.*
H_3: *Regional government support moderates the effect of national income tax policy on athlete participation.*

METHODOLOGY

This study employed a descriptive analytical research design with a quantitative approach to examine the impact of the national income tax policy on the performance and participation of professional tennis athletes in Indonesia, and the moderating role of regional government support. The population included stakeholders within the professional tennis ecosystem, consisting of professional tennis athletes, coaches, athlete managers, tennis association officials, and local sports office representatives. A purposive sampling technique was used to select respondents with direct experience and adequate knowledge of income tax policy, active competition at the national or international level, and interaction with fiscal and regional support programs (Sekaran & Bougie, 2016). The sample consisted of 50 respondents: 30 professional tennis athletes, 10 coaches or athlete managers, and 10 local government sports officials or tennis association administrators, determined with a statistical power of 80% and a 5% significance level to ensure reliability.

Data were collected through a structured questionnaire measuring perceptions on the impact of taxation on income, its effect on performance, its influence on participation in professional competitions, and the role of regional government support in mitigating tax burdens (Tewu, et al 2025). Covariates included athlete age, achievement level, years of professional experience, amount of local government support received, and total tax paid. Data analysis combined descriptive statistics for demographic profiling with thematic qualitative analysis to identify patterns and relationships between taxation, performance, and participation (Malhotra, 2020)

Although no direct experimental manipulation was conducted, hypothetical mitigation scenarios were simulated, including performance bonuses, free access to training facilities, travel subsidies, and local sports promotion programs. The perceived effectiveness of each strategy was calculated using the formula:

Mitigation Effectiveness Score = Perceived Benefit × Feasibility

This integrated approach ensured both statistical reliability and rich interpretive insights into the interplay between taxation, performance, participation, and regional government support for professional tennis athletes in Indonesia.

RESEARCH RESULT
Respondent Characteristics
The study involved 50 respondents, consisting of:
a. 30 professional tennis athletes (60%).
b. 10 coaches or athletes' managers (20%).
c. 10 local government sport officials or tennis association administrators (20%).

Table 2. Respondent Demographics

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	32	64%
	Female	18	36%
Age	18-25 years	14	28%
	26 – 35 years	21	42%
	>35 years	15	30%
Role	Athlete	30	60%
	Coach/Manager	10	20%
	Government Offcial/Association	10	20%
Competition Level	National	27	54%
	International	23	46%
Experience	<5 years	12	24%
	5-10 years	20	40%
	>10 years	18	36%

This profile shows a balanced representation between genders and a mix of age groups, ensuring diverse perspectives. More than half of the athletes compete at the national level, with substantial international representation.

Validity Test

Table 3. Outer Loading Results

Construct/Variable	Indicator	Outer Loading	Remark
TAX	TAX1	0,812	Valid
	TAX2	0,794	Valid
	TAX3	0,836	Valid
PERF	PERF1	0,854	Valid
	PERF2	0,827	Valid
	PERF3	0,841	Valid
PART	PART1	0,821	Valid
	PART2	0,845	Valid
	PART3	0,832	Valid
SUPP	SUPP1	0,867	Valid
	SUPP2	0,839	Valid
	SUPP3	0,856	Valid

All outer loading values exceed the threshold of 0.70, confirming convergent validity each indicator strongly reflects its respective construct. The validity assessment follows established protocols for evaluating measurement models in structural equation modeling. (Fornell and Larcker 1981) provided foundational guidelines for assessing construct validity when dealing with unobservable variables and measurement error, which is essential in this study where key constructs are measured through perceptual scales rather than objective metrics. Their approach addresses the fundamental challenge in social science research of ensuring that latent constructs are properly specified and measured without confounding effects from measurement error.

Discriminant Validity – Fornell – Larcker Criterion

Table 4. Fornell – Larcker Criterion

Construct	TAX	PERF	PART	SUPP
TAX	0,814			
PERF	-0,412	0,814		
PART	-0,385	0,645	0,833	
SUPP	-0,276	0,498	0,512	0,854

Diagonal values (square roots of AVE) are higher than inter-construct correlations, indicating that each construct is distinct from the others meeting discriminant validity requirements.

Reliability Test

Table 5. Reability Test Results

Construct/Variable	Cronbach's Alpha	Composition Reliability	AVE	Remark
TAX	0,781	0,867	0,663	Reliable
PERF	0,803	0,875	0,707	Reliable
PART	0,796	0,869	0,694	Reliable
SUPP	0,812	0,884	0,729	Reliable

All Cronbach's Alpha and Composite Reliability values exceed 0.70, and AVE values are above 0.50, confirming the constructs' internal consistency and measurement reliability. These thresholds align with established psychometric standards for construct reliability assessment (Kline, 1999).

R-Square Test

Table 6. R-Square Test Results

Endogenous Variable	R^2	Interpretation
Athlete Performance (PERF)	0,364	Moderate
Athlete Performance (PART)	0,352	Moderate

The independent variables explain 36.4% of the variance in performance and 35.2% in participation—considered a moderate predictive power according to Furthermore, (Chin 1998) emphasizes that PLS-SEM is particularly suitable for exploratory research and theory development, which aligns with this study's objective of examining the relatively unexplored intersection between fiscal policy and athlete performance. The PLS approach allows for the simultaneous examination of measurement and structural models, making it ideal for analyzing complex relationships involving moderating effects, as demonstrated in this research through the interaction between tax policy and regional government support.

F-Square Test

Table 7. F-Square Test Results

Relationship	F^2	Interpretation
TAX → PERF	0,181	Medium
SUPP → PERF	0,124	Small
TAX x SUPP →PERF	0,097	Small
TAX → PART	0,165	Medium
SUPP → PART	0,138	Small
TAX x SUPP →PART	0,102	Small

Tax has a medium effect size on both performance and participation, while government support and its moderating role exert small yet meaningful effects.

Descriptive Statistics

Table 8. Descriptive Statistics

Variable	Mean	SD	Min	Max	Category*
Tax Impact on Income	135,2	12,5	98	158	Medium
Athlete Performance	142,8	14,2	105	165	Medium
Athlete Participation	148,5	11,8	112	170	Medium
Government Support	156,3	10,6	128	172	High

Based on the Three-box Method

Most variables score in the medium category, except government support, which is rated highindicating significant regional assistance to athletes.

Correlation Analysis

Table 9. Pearson Correlation Matrix

Variable	TAX	PERF	PART	SUPP
TAX	1	-0.412**	-0.385**	-0.276*
PERF	-0.412**	1	0.645**	0.498**
PART	-0.385**	0.645**	1	0.512**
SUPP	-0.276*	0.498**	0.512**	1

$*p < 0.05$, $**p < 0.01$.

Tax is negatively correlated with performance and participation, while government support is positively correlated with both outcomes.

Regression Results

a. Model 1: Athlete Peformance

Table 10. Regression – Athlete Performance

Variable	β	t	Sig.	Remark
TAX	-0.412	-3.12	0.004	Significant negative
SUPP	0.328	2.89	0.006	Significant positive
TAX × SUPP	0.298	2.54	0.015	Significant moderation
R²	0.364			Moderate

The significant interaction effect (TAX × SUPP = 0.298, $p < 0.05$) confirms the moderating role of regional government support. This finding aligns with the methodological framework established by (Haerani et al. 2019), who emphasized that properly specified interaction terms can reveal how moderating variables alter the strength and direction of relationships between predictors and outcomes. In this context, regional government support effectively buffers the negative impact of taxation on athlete performance, demonstrating that behavioral outcomes in professional sports can be influenced by the interplay between policy constraints and supportive interventions.

b. Model 2: Athlete Participation

Table 11. Regression – Athlete Participation

Variable	β	t	Sig.	Remark
TAX	-0.385	-2.84	0.007	Significant negative
SUPP	0.342	3.01	0.004	Significant positive
TAX × SUPP	0.315	2.64	0.011	Significant moderation
R²	0.352			Moderate

Tax burden significantly reduces both athlete performance and participation, while government support positively influences both outcomes and mitigates the negative effect of taxes.

Hypothesis Test

Table 12. Hypothesis Testing Results

Hypothesis	Relationship	β	t-statistic	p-value	Result
H1	TAX → PERF	-0.412	3.12	0.004	Accepted
H2	TAX × SUPP → PERF (Moderation)	0.298	2.54	0.015	Accepted
H3	TAX × SUPP → PART (Moderation)	0.315	2.64	0.011	Accepted

DISCUSSION

Impact of National Income Tax Policy on Athlete Performance

The findings demonstrate that higher national income tax burdens negatively affect the performance of professional tennis athletes in Indonesia. In line with Human Capital Theory (Breuer et al 2021), reduced net income limits the athletes' ability to invest in essential resources such as quality coaching, advanced training programs, travel for tournaments, and high-standard equipment. Beyond the direct financial constraints, tax burdens may also impact athletes' subjective well-being and psychological state. (Diener 2000) demonstrated that financial stress and economic uncertainty are significant predictors of reduced life satisfaction and negative affect. For professional athletes, whose careers depend heavily on mental resilience and positive psychological states, financial pressure from taxation can create a cascade effect—reducing not only their ability to invest in training resources but also their overall well-being, which is fundamental to peak athletic performance. This financial constraint directly impacts performance, as skill development and competitive readiness in professional tennis require continuous monetary investment. This financial constraint directly impacts performance, as skill development and competitive readiness in professional tennis require continuous monetary investment.

Effect of Tax Burden on Athlete Participation

The results also indicate a negative relationship between national income tax policy and athlete participation in competitions. Limited financial resources force athletes to reduce the number of tournaments they enter, prioritize lower cost events, or avoid international competitions altogether. This finding supports H1, emphasizing that taxation, without adequate compensatory measures, can reduce athletes' exposure, rankings, and career progression.

Moderating Role of Regional Government Support in Athlete Performance

Consistent with Fiscal Federalism Theory regional governments though unable to alter national tax rates can play a balancing role through non tax incentives. The study confirms H2, showing that regional support, in the form of performance bonuses, subsidized training facilities, and reduced local fees, can mitigate the negative impact of taxation on athlete performance. Such measures allow athletes to maintain training intensity and competitive standards despite heavy tax obligations.

Moderating Role of Regional Government Support in Athlete Participation

The findings also validate H3, showing that regional government support helps sustain athlete participation in tournaments. This is aligned with Motivation Theory (Deci & Ryan, 1985), which highlights the role of external motivators in maintaining commitment. Incentives such as travel allowances, logistical assistance, and access to facilities reduce financial barriers and strengthen athletes' willingness to remain active in both national and international competitions.

Interpretation of Predictive Power and Effect Sizes

The moderate R^2 values for both performance (0.364) and participation (0.352) suggest that taxation and government support are significant but not sole determinants of athlete outcomes. The interpretation of these findings follows framework for PLS-SEM result interpretation. emphasize that PLS-SEM results should be evaluated not only for statistical significance but also for practical relevance and theoretical consistency. In this study, the moderate predictive power indicates that while the fiscal policy framework explains a substantial portion of variance in athlete outcomes, the model appropriately acknowledges the complexity of factors influencing professional sports performance. (Hair et al. 2019) note that in behavioral research involving human subjects, R^2 values between 0.25 and 0.50 often represent meaningful explanatory power, particularly when examining policy impacts on individual behavior. Other influential factors may include sponsorship availability, health conditions, and personal motivation. Other influential factors may include sponsorship availability, health conditions, and personal motivation. The medium effect size of taxation and the smaller yet meaningful effect size of government support indicate that an integrated approach combining national and regional effortswill yield more sustainable athlete development.

Policy Implications and Strategic Recommendations

The evidence points toward the necessity of harmonizing national fiscal policies with proactive regional interventions (Destine et al 2025). A coordinated framework where central tax regulations are complemented by targeted local support can ensure that fiscal responsibility does not undermine athlete performance and participation (Tewu et al 2025). This synergy is essential for maintaining Indonesia's competitiveness in the global tennis arena while safeguarding the livelihood and career sustainability of professional athletes (Morris, 2022).

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that national income tax policy has a significant negative impact on the performance and participation of professional tennis athletes in Indonesia, whereas regional government support in the form of financial incentives, facility subsidies, and logistical assistance plays a crucial moderating role in mitigating these effects; therefore, a harmonized framework between central fiscal regulations and proactive local interventions complemented by strategic tax incentives, expanded regional support programs, public–private sponsorship collaborations, and athlete financial literacy initiatives is essential to sustain competitive performance (Lusardi et al 2010), (Sabri & MacDonald, 2010) enhance participation at national and international levels, and ensure the long-term development of Indonesia's professional tennis sector.

ADVANCED RESEARCH

This study has several limitations that should be acknowledged. First, the research was conducted with a relatively small sample size of 50 respondents, which may limit the generalizability of the findings to the broader population of professional tennis athletes in Indonesia. Second, the data relied on self-reported perceptions, which are subject to potential response bias and may not fully capture objective measures of performance and participation. Third, the cross-sectional design restricts the ability to determine causal relationships between taxation, government support, and athlete outcomes over time. Additionally, the scope was limited to professional tennis, so the dynamics in other sports with different financial structures and support systems may yield different results.

(Henseler et al 2015). For future research, it is recommended to expand the sample to include athletes from multiple sports disciplines, employ longitudinal designs to observe the long-term effects of taxation and regional support, and integrate objective performance indicators such as ranking changes, tournament participation records, and income data. From a methodological perspective, future studies should consider employing more advanced discriminant validity assessment techniques. While this study used the traditional (Fornell, C., & Larcker, D. F. 1981) have demonstrated that the Heterotrait-Monotrait (HTMT) ratio provides superior accuracy in detecting discriminant validity issues in PLS-SEM analysis. Future research examining similar policy-behavior relationships should incorporate HTMT assessment to ensure more robust measurement model evaluation, particularly when dealing with complex constructs that may

exhibit varying degrees of conceptual overlap. Additionally, future studies could explore the role of athletes' political attitudes and policy preferences (Caprara & Zimbardo, 2004) as potential moderating factors in the relationship between fiscal policies and athletic outcomes, as individual congruency with government approaches may influence policy effectiveness.

Moreover, future studies could explore the role of private sponsorship, corporate social responsibility (CSR) programs, and athlete driven income diversification strategies as additional moderating variables in the relationship between fiscal policy and sports performance. Moreover, future studies could explore the role of private sponsorship, corporate social responsibility (CSR) programs, and athlete driven income diversification strategies as additional moderating variables in the relationship between fiscal policy and sports performance.

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