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# **POLICY RESEARCH TO SUPPORT THE MEDIUM-TERM BUDGET FRAMEWORK: TAX BURDEN MEASUREMENT AND ANALYSIS**

ULAANBAATAR  
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THE EUROPEAN UNION FUNDED “SDG ALIGNED BUDGETING TO TRANSFORM EMPLOYMENT IN MONGOLIA” PROJECT

**POLICY RESEARCH TO SUPPORT THE MEDIUM-TERM BUDGET FRAMEWORK:  
TAX BURDEN MEASUREMENT AND ANALYSIS**

**Developed by:**

Economic Research Institute Consultancy Team

Narantuya. Ch (Ph.D), team leader

Tuvshintugs. B (Ph.D), consultant

Manlaibaatar. Z (Ph.D), consultant

Khishigt. D (Ph.D), consultant

Dorjderem. D, consultant

Borgil. S, consultant

Bolorchimeg. Kh, consultant

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## Abbreviations

ADB	Asian Development Bank
CFC	Controlled Foreign Corporation
CIT	Corporate Income Tax
ET	Excise Tax
ETR	Effective Tax Rate
FDI	Foreign Direct Investment
GAAR	General Anti Avoidance Rule
GASI	General Authority of Social Insurance
GDP	Gross Domestic Product
IMF	International Monetary Fund
JICA	Japan International Cooperation Agency
MRP	Mineral Royalties Payment
MSLP	Minimum Subsistence Level of Population
MTA	Mongolian Tax Administration
NAO	National Audit Office
NSO	National Statistical Office
OECD	Organisation for Economic Co-operation and Development
PE	Permanent Establishment
PIT	Personal Income Tax
RA-GAP	Revenue Administration Gap Analysis Program
SIC	Social Insurance Contributions
SME	Small and Medium-sized Enterprises
TADAT	Tax Administration Diagnostics Assessment Tool
TP	Transfer Pricing
TPM	Transfer Pricing Method
US	United States
VAT	Value Added Tax

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## EXECUTIVE SUMMARY

Following the 2007 reforms that simplified the tax system and introduced proportional taxation, Mongolia experienced economic expansion and high growth. Subsequent reforms in 2015 and 2019 focused on shrinking the informal sector, broadening the tax base, and digitalizing tax processes.

The national tax burden has fluctuated between 21% and 30% of GDP since 2010, remaining lower than the OECD average. However, this burden is unevenly distributed across sectors. In 2022, the highest tax burden (as a percentage of sectoral GDP) fell on administrative support (49.1%), other services (40.1%), and mining, manufacturing, and finance (34%). Conversely, the agricultural sector carries a minimal burden (1.1%).

As of 2022, over 220,000 taxpayers are registered for CIT, with two-thirds filing tax returns. Large enterprises (accounting for only 0.4% of total filers) contribute nearly 80% of total CIT collected. The CIT structure implements a progressive tax rate, with companies under MNT 300 million in annual revenue taxed at 2%, rising to 23% for those exceeding MNT 3 billion.

Mining, trade, finance, and manufacturing industries are the primary sources of tax revenue, contributing 78% of the total in 2022. These, along with transportation, construction, and information communication sectors, have consistently contributed over 90% of CIT revenue in the past decade.

The highest CIT burdens are borne by mining (24.2%), finance (21.3%), information communication (18.3%), and manufacturing (15.9%). This is likely due to a high concentration of large enterprises within these sectors, which fall into the highest tax bracket (25%). Conversely, trade, construction, and transportation sectors have lower burdens (10.9%-13.9%) due to fewer large enterprises exceeding the 6 billion MNT threshold.

Considering all taxes and social insurance contributions (SIC), the mining sector carries the heaviest burden (19.1% of sales revenue in 2022), with 10.4% paid in royalties and 4.7% in CIT. Trade, construction, and transportation sectors have the lowest burden (less than 5% of sales revenue), with a relatively even distribution across CIT, SIC, and VAT.

Withholding of PIT and SIC creates a significant burden for labor-intensive sectors. In 2022, education, arts, healthcare, services, finance, agriculture, and administrative support sectors shouldered an average burden of 6.9% of sales revenue in PIT and SIC.

The overall tax burden has decreased since 2014 for most sectors except finance. This includes sectors with traditionally high tax contributions such as mining, manufacturing, construction, trade, transportation, and information communication.

Mongolia's ranking of 71st out of 191 countries for ease of paying taxes indicates room for improvement. While the electronic tax system simplifies payment and collection, further

measures, especially regarding customs duties, are necessary.

The current tax system has a limited positive effect on income redistribution. While recent reforms aimed to make taxes more progressive, high income thresholds hinder their effectiveness.

Mongolia relies heavily on indirect taxes, primarily VAT, which disproportionately burden low-income earners and small businesses due to their lack of connection to income or wealth. Future reforms should aim to increase the share of direct taxes for a more equitable income distribution. However, ensuring efficient VAT implementation, including avoiding double taxation and timely refunds, remains crucial. The possibility of making VAT more progressive warrants further research and cost-benefit analysis.

Public trust in government spending is essential for a healthy tax system. Transparency and efficiency in taxpayer fund allocation, along with high-quality government services, foster positive tax morale. Unfortunately, Mongolia has seen a decline in governance indicators related to public investment efficiency, government effectiveness, and anti-corruption measures over the past 6-8 years. Therefore, improving government spending efficiency should be a priority before implementing further tax reforms.

To regain public trust, the government should prioritize efficient and transparent budget spending, legal and transparent procurement processes, and improved quality across government services, including infrastructure development and a more professional and independent civil service. By demonstrating responsible use of collected tax revenue, the government can build public support for a gradual shift towards a system dominated by direct taxes.

Within the broader tax policy framework, transitioning the individual tax reporting system from voluntary to mandatory can improve transparency. This would ensure comprehensive registration of all income types and streamline processes requiring income verification, such as loan applications. Tax payment documents could then replace social security contribution receipts for such purposes. Additionally, channeling tax credits and social protection programs like child benefits and food stamps through the tax refund system could improve program targeting and employment. Integrating social protection, taxes, income, and employment data within the tax return system would enhance policy coordination in these areas. A detailed study exploring this approach is recommended.

# 1 MONGOLIA'S TAX SYSTEM AND POLICY

## 1.1 Mongolia's tax reform after the transition

In Mongolia, the beginning of modern taxation was established in the 1990s, coinciding with the implementation of social and economic reforms that initiated the transition to a market economy, acceptance of private property, and the establishment of a legal framework for business activities. Subsequently, the Constitution of Mongolia, approved on 13 January 1992, reaffirmed the issue of taxes by stating that it is the fundamental obligation of a citizen of Mongolia to pay taxes imposed by law.

In 1992, the foundation of modern tax administration was established with the approval of a series of tax laws, including the General Tax Law, the Economic Entity and Organization Income Tax Law, and the Personal Income Tax Law, alongside the Constitution of Mongolia. These laws were approved with the aim of developing a modern tax system aligned with market economic relations and establishing tax administration and its organizational structure. Subsequently, laws such as the Gun Tax Law, the Excise Tax Law, and the Income Tax Law of individuals whose income from work and services cannot be determined on each occasion were approved in 1993. This was followed by the Law on Fees for Natural Resource Use in 1995, the Law on Customs Duty in 1996, the Law on Payment for Mineral Resource Use in 1997, and the Value Added Tax Law in 1998. During this period, Mongolia also concluded agreements with other countries on the avoidance of double taxation of income and capital, as well as prevention of tax evasion.

The tax policy has been aiming at making every citizen recognize and understand the importance of paying taxes, and the taxes they pay is used to build up the public treasury, to finance public services such as kindergartens, schools, hospitals, the police and the military to maintain social order, and that it is spent for the betterment of the lives of all citizens and our future generations.

### ***Tax Reform – First stage: 2007***

Mongolia carried out its first tax reform in 2007 in order to improve the tax legislation, reduce the tax burden and ensure economic growth. As part of this reform, tax rates were lowered and “Four 10 policy” was introduced, which set taxes on personal income, corporate income, interest income, and value added at 10 percent. Additionally, certain regulations in line with international standards were reflected in the tax laws and regulations.

Within the framework of this reform, Mongolia's tax system has aligned with international standards, establishing the country as one with relatively low tax rates and improved competitiveness. A clear example of this is illustrated in the 2015 research report<sup>1</sup> by the World Bank International Finance Corporation, which assesses the tax environments of countries

1 Doing Business 2015: Going Beyond Efficiency, World Bank, <https://doi.org/10.1596/978-1-4648-0351-2>

around the world and compiles comprehensive rankings. According to this report, Mongolia is ranked as the 84th most favorable country in terms of its tax environment, positioning it as the 28th lowest tax country worldwide, with an average tax rate of 24.4 percent.

### ***Tax Reform – Second stage: 2019***

Mongolia initiated the second stage of tax reform in 2019 with the goal of fostering a business-friendly, job-creating environment that ensures fairness and equality in taxation.

This tax reform aimed to expand and protect the tax base, bring the method of settling tax debts to a new level, ensure tax control and transparency, and align legislation with the fundamental principles of international taxation. In 2015, the Value Added Tax Law was revised, followed by revisions to the General Tax Law, the Corporate Income Tax Law, and the Personal Income Tax Law in 2019.

As part of the second stage of tax reform, tax evasion violations have been reduced to a certain extent by introducing an electronic tax system, a payment receipt system to eliminate fraudulent invoice violations, and recording end-user purchases. In addition, the threshold for registering as a value-added taxpayer was increased from MNT 10 million to MNT 50 million in order to reduce the tax costs and burden of small-scale productions.

Furthermore, the government has focused on supporting small and medium-sized enterprises (SME) and helping them expand their business scope by tax refund. Enterprises with an annual sales revenue of less than MNT 1.5 billion are eligible for a refund of 90 percent of the income tax they paid to the budget.

In addition, individuals with annual sales revenue up to MNT 50 million and enterprises with revenue up to MNT 300 million will have the option to pay 1 percent of their sales revenue as tax and file a simplified tax return once a year, if they choose. This measure has enabled micro and small-scale enterprises to reduce the costs associated with tax payment and reporting. Furthermore, starting from 2024, the threshold of MNT 50 million in individual's income was abolished.

A major reform was implemented in the tax collection system, extending the grace period for paying tax debts from 2 months to 1-2 years. Also, the tax administration have adopted procedures from Japan, particularly in debt settlement and asset seizure related compulsory enforcement.

In addition, the risk of the investors has been reduced and the opportunity to recover the investment has been increased by shortening the capital depreciation period, extending the loss transfer period, and eliminating taxes paid abroad.

Mongolia has complied with the Global Forum on Transparency and Exchange of Information for Tax Purposes, the Multilateral Convention to implement the Tax Treaty

Related measures to prevent Base Erosion and Profit Shifting, and has incorporated transfer

pricing reporting, cooperation with other countries' tax administrations, information exchange for tax purposes, as well as regulations to protect information security and confidentiality into its tax legislation. In addition, the law stipulates that tax inspections are conducted solely based on risk, and tax inspectors do not have the right to appeal decisions made by the Tax Dispute Resolution Council.

As part of the tax reform, personal income tax (PIT) was structured into three levels. The primary objective of this reform was to enhance tax progressivity. By lowering the rate to 1 percent and making it easier to pay taxes for small businesses with low incomes, the tax system has become more progressive. However, accurately calculating the actual tax burden may pose challenges due to additional payments and fees for government- provided services imposed on enterprises, separate from taxes. Therefore, as part of the tax reform, it is recommended to conduct research on the tax burden imposed by these additional payments and fees.

## 1.2 Recommendations from international organizations regarding Mongolia's tax system

Mongolia received technical assistance from the International Monetary Fund (IMF) and the Japan International Cooperation Agency (JICA) regarding the implementation of the second tax reform.

The following 2-stage technical assistance was received from the IMF:

### 1. Memorandum of Cooperation between the Mongolian Tax Administration and the Department of Budgetary Affairs of the International Monetary Fund dated February 9, 2017:

Project name: *Improving Taxpayers' Compliance May 1, 2017- April 30, 2020*

To implement this project, assistance was provided within the following 5 modules:

- Tax administration operations and compliance risk management;
- Basic functions and procedures of the tax administration;
- Activities to support the tax administration;
- Training and learning from colleagues;
- Development and dissemination of budget tools;

## 2. Memorandum of Cooperation between the Ministry of Finance of Mongolia, the Mongolian Tax Administration and the Department of Budgetary Affairs of the International Monetary Fund dated February 24, 2020:

Project name: *Improving Tax Policy and Taxpayers' Compliance (phase 2) May 1, 2020- April 30, 2024*

To implement this project, assistance is provided within the following 4 modules:

- Developing tax policy (including analysis of improved revenue performance);
- Tax administration operations and compliance risk management (including development of strategies to improve compliance);
- Providing support to the tax administration (including information technology and data analysis);
- Development and dissemination of budget tools (including methods for determining tax revenue gaps).

Within the framework of this assistance, aside from the IMF, Mongolia has received support from the Japan International Cooperation Agency (JICA), the Asian Development Bank (ADB), and the Organisation for Economic Co-operation and Development (OECD).

As part of this technical assistance, the following recommendations have been issued:

1. *"Mongolia: Implementation of a Strategy to Improve Compliance, the General Tax Law Reform, and Simplified Tax System Modelling" technical assistance report, John Brondolo, Irving Aw, Susan Betts, Annette Chooi, Isaias Coelho, Caitlin Quigley, Robert Olding, Michael Smithson, July 2017.*

This report pertains to the first phase of technical assistance. The report includes an executive summary and the following 7 chapters aimed at providing guidance on tax administration and regulatory issues under the technical assistance framework. These chapters are I. Framework for improving compliance, II. Compliance strategies for micro- businesses, III. Compliance strategies for small businesses, IV. Compliance strategies for medium-sized businesses, V. Compliance strategies for large businesses, VI. General Tax Law reform, and VII. Development of a simplified tax system model.

The General Tax Law reform addresses issues such as legalizing the issuance of recommendations on tax law application, establishing the right to access external information related to tax payment determination, reviewing tax liability amounts, simplifying the activities of the Tax Dispute Resolution Council, providing flexibility in tax debt payment deadlines, and introducing GAAP rules or anti-avoidance rule.

According to this recommendation, relevant changes in tax reform were approved. Specifically, the law now includes provisions for categorizing taxpayers into income segments. Additionally, the General Tax Law grants the head of the Mongolian Tax Administration (MTA) the authority to issue official interpretations of the law, though this right has not been

exercised in the five years since the law's implementation. The right to cross-examination is established by law and is utilized in the tax collection process. The liability provisions outlined in the General Tax Law have been amended based on the recommendations. The Tax Dispute Resolution Council previously handled disputes in two stages but now operates with a single stage. Furthermore, a simplified tax reporting system has been introduced as part of the reform.

2. *"Mongolia: Tax Administration Reform Implementation Guide for 2018-2019" technical assistance report, John Brondolo, Kors Kool, Susan Betts, Annette Chooi, Jon Davidson, Caitlin Quigley, Raelin Vivian, Greg Williams, July 2018*

This report pertains to the first phase of technical assistance. The report is designed to provide guidance on tax management and regulatory issues within the framework of technical assistance and consists of an executive summary and the following 7 chapters. These chapters are I. Strategies to improve compliance - problems involving all functions of the tax administration, II. Compliance strategies for large taxpayers, III. Compliance strategies for medium-sized taxpayers, IV. Compliance strategy for small taxpayers, V. Compliance strategy for micro taxpayers, VI. Implementation of changes in tax legislation, and VII. Technical assistance.

Taxpayers are divided into segments depending on their scale of operations or sales revenue, and the conditions for determining their risks are outlined in the General Tax Law as part of the reform. Additionally, following a proposal to set a schedule and establish a working group tasked with developing rules and regulations related to tax law and regulation reforms, relevant regulations have been formulated.

3. *"Mongolia: Tax Administration Reform Implementation Guide for 2019-2020" technical assistance report, John Brondolo, Annette Chooi, Sunita Maniks, Michael Oomen, Orla Rished, Greg Williams, July 2019*

This report pertains to the first phase of technical assistance and focuses on advising on tax management and regulatory issues within the framework of technical assistance. It comprises an executive summary and seven chapters, structured as follows: I. Overview and issues involving the functions of the MTA, II. Implementation of revised tax laws, III. Compliance strategies for large taxpayers, IV. Compliance strategies for medium-sized taxpayers, V. Compliance strategies for small taxpayers, VI. Compliance strategy for micro-taxpayers, and VII. Technical assistance.

The report provides recommendations on issues to consider concerning the new tax legislation. In other words, it is aimed at strengthening the capacity of tax administration in relation to compliance.



4. *"Mongolia: The Revenue Administration - Gap Analysis Program: Value Added Tax Gap Estimation" technical assistance report, Eric Hutton, Mick Thackray, Kanar Ahmed, November 2017*

The report presents the results of applying the VAT Gap calculation methodology of the Revenue Administration Gap Analysis Program (RA-GAP) to Mongolia's indicators from 2008-2016. The main violations identified in the report are:

The VAT system of Mongolia has significantly violated the standard system. For instance, the majority of mining products are exempted from VAT when exported, which increases the amount of VAT.

It was concluded that Mongolia's VAT revenue showed significant fluctuations, notably increasing in 2011, and then decreasing until 2015. The report attributes this increase to the non-refund of VAT on mining products, despite VAT payments being made on imported goods for production related to mining and foreign investment growth. In Mongolia, there is a big gap in the enforcement of laws and regulations, and the fact that VAT refunds are not granted is considered a high risk.

The following recommendations were made regarding these issues:

- Assess special tax agreements, regulations and planning in mining and other related sectors to determine the compliance risks;
- To understand the impact of major investment projects in the mining sector on domestic VAT and import VAT;
- Analyze VAT revenue separately for domestic and import VAT in the mining sector and other economic sectors;
- Focus on re-examining the balance of overpayments and taxpayer debts, and taking appropriate measures to reduce budgetary risks;
- Utilize income and tax gap analysis in collaboration with the Budget Revenue Department of the Ministry of Finance for the purpose of monitoring the compliance risk, as well as budgetary risks;
- Review taxpayers' industry classification codes and classify them accordingly;
- Assessing the behavior of businesses with sales close to the VAT threshold to avoid registering as VAT payers.

5. *"Mongolia: VAT Gap Self-Assessment Review" technical assistance report, Patricio Barra, February 2023*

This report is related to the second phase of technical assistance. The project aims to enhance tax revenue steadily by strengthening the capacity of the tax administration. It has been identified that achieving this goal can be facilitated by providing the tax administration with performance metrics to measure and quantify taxpayer compliance.

In this context, evaluating VAT revenue performance through VAT Gap analysis is feasible,



and it is recommended to introduce this method to the tax administration.

6. *“Mongolia: Tax Administration Diagnostics Assessment Tool (TADAT) Performance Assessment Report” February 2022*

This report identifies both strengths and weaknesses in the performance of the MTA. The operational performance of the MTA is rated as good compared to tax administrations in most of the other countries with a similar level of development.

It was concluded that the strengths of the operations are in the areas of accuracy of taxpayer information, risk identification and assessment, receipt of tax reports, widespread use of electronic systems for tax collection, and timely response to information requests. In the future, it is recommended to monitor and evaluate the planned activities, take compulsory measures to ensure tax returns and debt settlement, resolve disputes, and improve the tax refund process.

7. *“The Project for Enhancing Tax Collection Operation and International Tax Issues of Mongolian Tax Administration” technical assistance project by JICA:*

JICA has provided technical cooperation assistance to the MTA over the past decade. This assistance contributed to the strengthening of Mongolia’s tax collection capacity, and the formation and growth of tax revenue, which is the basis of the state’s budget and finances. Since 2013, JICA has implemented the following projects focusing on tax collection and international taxation:

- 1) “The Project for Enhancing Tax Collection Operation and International Tax Issues of Mongolian Tax Administration”

Project duration: December 2013 - October 2016

This project included training for inspectors responsible for the future of the international taxation industry, as well as other regular inspectors, along with recommendations for the formation of the system. Regarding tax collection, Tax Debt Call Center aimed at the settlement of low-value tax debts has been established, and recommendations related to debt collection have been formulated and implemented.

- 2) “The Project for Enhancing Tax Collection Operation and International Tax Issues of Mongolian Tax Administration” (phase 2)

Project duration: February 2017 - March 2020

Within the framework of the project, the project consultant provided opinions on draft laws and accompanying regulations. Concurrently, amid economic difficulties caused by a decline in mineral prices, officials decided to secure a total support package of USD5.5 billion from donors. The required conditions for the support package included budget spending cuts, revenue generation through tax system reform, and implementation of tight budget policy. As part of the secondary tax reform, relevant recommendations were included in the tax

legislation and implementation commenced in January 2020. The following proposals were put forward within the project framework and have since been incorporated into law:

- Tax collection

Grant of priority tax collection, self-enforcing, expansion of the scope of tax payment obligations, advance tax collection system, and introduction of a tax payment grace period system

- International taxation

Related to the transfer pricing tax system: definition of transfer pricing (TP), definition of related party, fundamental principle of transfer pricing, documentation, adjustment of transfer pricing, transfer pricing method (TPM).

Except for the transfer pricing method: General Anti Avoidance Rule (GAAR), mutual agreement procedure, exchange of information, domestic source income, permanent establishment (PE), provisions for the overpaid interest tax system, and controlled foreign companies (CFC)

Although the draft law was approved, MTA lacked practical experience in utilizing the provisions of this law to ensure its effective implementation. For instance, tax collection activities such as asset investigation, seizure, auctioning, and distribution of liquidated assets were carried out by tax administration for the first time in Mongolia. These activities fall within the domain of judicial enforcement organizations, requiring specific knowledge and skills. Therefore, there was an immediate need to acquire expertise within a short timeframe. Furthermore, while the tax reform aligned with OECD principles on international tax matters, it was found that there was insufficient experience in taxation, compounded by the lack of prior instances of international tax audits.

### **1.3 Regarding the audit conducted by the National Audit Office**

#### **Tax reform policy implementation and its effectiveness performance audit, 2023**

The National Audit Office (NAO) has audited the implementation and effectiveness of the tax reform policy. It was concluded that as a result of the tax reform, the tax base has expanded, and budget revenue has increased. The audit report includes the following recommendations:

1. Organize accessible tax returning, imposition, and collection for individuals and SME owners and enhance control through the payment receipt system (e-barimt);
2. Take practical measures to resolve accumulated or difficult-to-repay tax debts;
3. Improve the legal framework governing compulsory enforcement and ensure effective implementation through inter-sectoral coordination;

4. Communicate tax activities to other government agencies and share information with them in real-time, in accordance with advancements in information technology;
5. Focus on preserving and protecting state and official secrets in accordance with relevant laws.

***Performance audit report on tax credits and exemptions policy: implementation and results, 2018***

It was concluded that the policy and regulations regarding tax credits and exemptions are unstable, and the results are insufficient.

***Compliance audit on the implementation of the Law on Fees for Natural Resources Use, 2023***

It has been concluded that the implementation of the Law on Fees for Natural Resource Use is insufficient due to inconsistencies among legal acts, relevant laws, and regulations, as well as a lack of coordination and control over the work of government institutions.

Since 2007, our country has undertaken staged tax system reforms aimed at aligning it with international standards. The 2007 reform focused on simplifying the multi-tiered tax system and establishing a uniform tax rate of 10 percent for several key taxes, irrespective of income level. It can be inferred that this reform had a positive impact on efficiency and economic expansion. The tax reforms of 2015 and 2019 aimed to achieve a more progressive tax structure, broaden the tax base, and simplify taxation for entities with lower sales revenue.

International organizations have concluded that if Mongolia's tax system does not align with international standards, it will not only harm taxpayers' interests but also result in insufficient authority for the MTA within the legislative framework to conduct tax audits and collect tax debts. Therefore, based on the policy research conducted in Mongolia, the following recommendations were made: tax audits should be conducted on a risk-based basis to protect taxpayers' interests, tax payment periods should be reduced significantly, the multi-stage process of the Tax Dispute Resolution Council should be streamlined to a single stage, allowing tax inspectors to resolve disputes. Additionally, it was recommended that tax administration should not have the right to appeal against the decisions made by the council. Furthermore, the methods of tax inspection and collection of tax debts should be aligned with international standards, accompanied by increased powers for the tax administration accordingly.

In this context, within the framework of the 2019 tax reform, the General Tax Law underwent revisions aligning tax audits with international standards. Additionally, entirely new provisions were introduced to combat transfer pricing and tax evasion. The revised General Tax Law also incorporates significant changes in principles concerning recovering tax debts from assets transferred to third parties, managing high-risk tax debts, and seizing assets.

According to the recommendations given by the NAO, despite the introduction of new tools

within the framework of the tax reform, it has been concluded that the rules and regulations related to the implementation of the reform are weak and poorly enforced. Therefore, in order to implement the tax reform in accordance with its goals, it is necessary to review and improve the duplication, violations, and practices of tax rules and regulations. In addition, it is noteworthy that Mongolia's VAT system deviates from the standard system.

## 2 CALCULATION OF TAX BURDEN ON ENTERPRISES IN MONGOLIA

### 2.1 International literature review on tax burden

There are many studies that calculate the tax burden at the country or macroeconomic level, the firm level, and the household level.

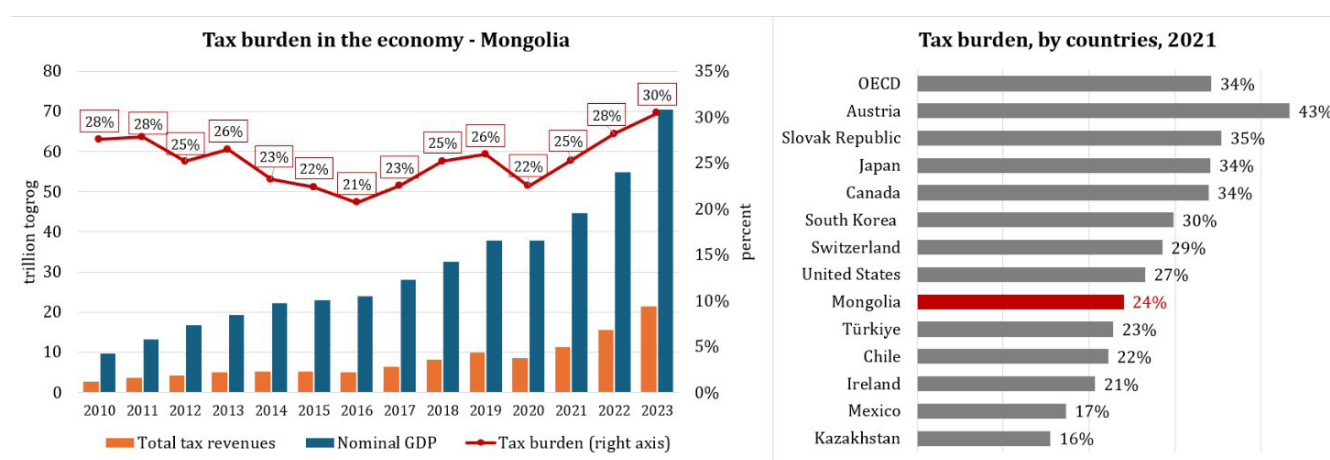
#### *The calculation of tax burden at a macroeconomic level*

The tax burden is calculated at the macroeconomic level as the percentage of total tax revenue to gross domestic product (GDP). This figure varies widely among countries worldwide, with the highest rate among OECD countries in 2022 being 46 percent and the lowest rate in Mexico at 16.9 percent. Over the last 20 years, the average for these countries has been 32–34 percent<sup>2</sup>.

Celikey (2020) concluded, based on data from OECD member countries from 1996 to 2016, that per capita income, foreign trade volume, employment capacity, unemployment rate, and the share of the industrial sector in the total economy positively affect the country's tax burden.

In 2023, according to National Statistics Office (NSO) data, Mongolia's tax burden stood at 30 percent. In 2021, our country's tax burden was lower than the average of OECD countries (see Figure 1).

**Figure 1. Tax burden in the economy**



Source: NSO, OECD tax database

<sup>2</sup> <https://data.oecd.org/tax/tax-revenue.htm>

### *The calculation of tax burden at enterprise level*

When calculating the tax burden at the microeconomic or enterprise level, the total tax paid is calculated as a percentage of taxable income.

The indicator that measures the tax burden is the tax rate. Although we can calculate the tax rate by the nominal tax rate or the rate prescribed by the law, in real life the tax levied on the enterprise is different from the nominal rate. The actual tax burden is measured by the effective tax rate.

In Mongolia, a flat tax rate of 10 percent or proportional tax has traditionally been predominant. Starting from 2023, PIT was changed from one tier to three tiers. SIC and most other taxes are prorated. CIT is structured into two tiers: 10 percent and 25 percent. The higher rate of 25 percent applies to enterprises earning MNT 6 billion or more, whereas most enterprises are taxed at the lower rate of 10 percent.

In 2007, the tax reform made many types of incremental taxes (see Table 1) equal to 10 percent, including CIT, PIT, VAT and SIC, referred to as “Four 10 policy”. As of 2023, PIT has three tiers: 10 percent, 15 percent, and 20 percent. Overall, our country has few number of tax brackets and low incrementality.

**Table 1. Changes in tax rates and levels**

Tax classification	1993–1997	1997–2001	2001–2004	2004–2007	2007–2019	2019–2022	Since 2023
PIT	5 tiers 0/2/15/ 27/40	3 tiers 10/20/40		3 tiers 10/20/30	1 tier 10		3 tiers 10/15/20
CIT	4 tiers 15/25/35/ 40	2 tiers 15/40		2 tiers 15/30	2 tiers 10/25	2 tiers 10/25 +simplified mode (1%)	
SIC (employer/employee)	15/7	19/10			10/10	11.7/11.5	
VAT	5	10	15	15	10 (2% refund from 2015 onwards)		

Source: Delgersaikhan. J, (2018), “Mongolia’s tax environment, and its effect on budget”, *Economic Analytica* No. 1 (02), pp. 8-19, Table II-1 expanded.

Although statutory taxes are generally proportional in nature, the tax rates paid in practice may vary from business to business. These may differ depending on the size of the enterprise (micro, small, medium, large), the operating sector, location (urban, rural, province, capital, etc.), and the size of the property.

Internationally, studies that calculated the actual tax burden at the enterprise level are abundant for developed countries, but relatively rare for developing countries.

Effective tax rate (ETR) can be calculated at the average level (average ETR), the marginal level (marginal ETR), or based on what the tax rate will be for additional income, on past or historical indicators (a backward-looking measure), on future changes (a forward-looking measure). In the case of proposed tax changes, the effective tax rate under the new law can be calculated (Carreras et al, 2017).

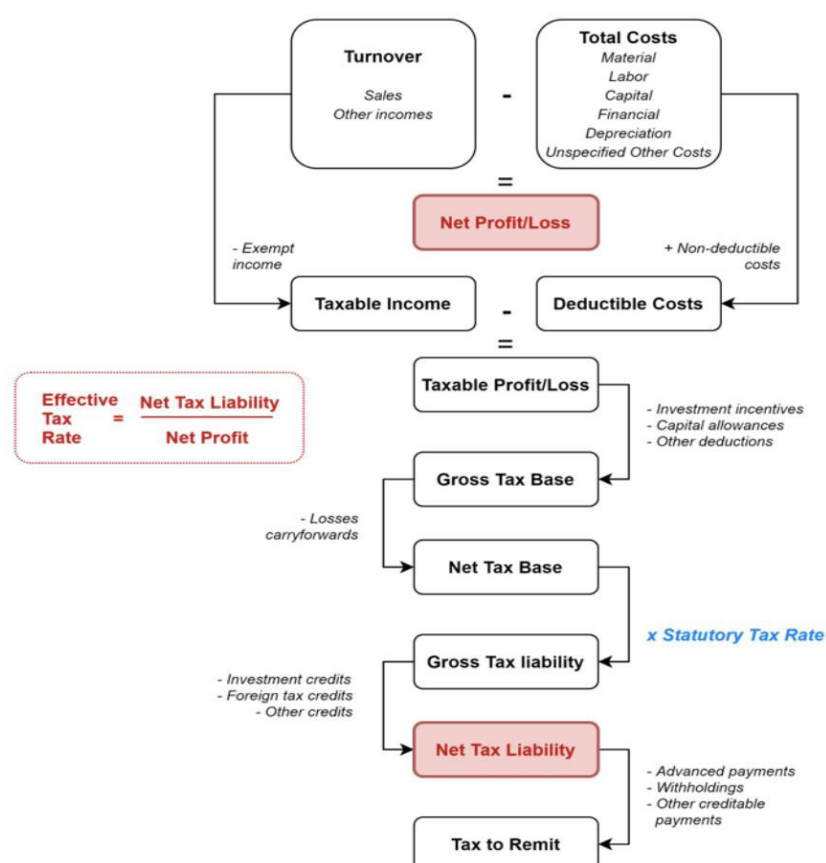
### Key concepts of the Research

How to determine the actual tax burden is detailed in research articles. The most common concept, along with the corresponding metric, is the ratio of total taxes paid (or must pay) to net income (taxable income).

For instance, the World Bank study illustrated the correlation of the calculated variables in the following figure. We will also make our own calculations based on this methodology.

Figure 2. Key concepts and variables

Figure 1: Key Concepts and Variables



Source: Bachas et al (2023)

### **Research data**

In terms of data, the use of data from MTA and administrative records ensures clarity regarding official taxes paid and tax refunds; however, it does not account for informal income and tax evasion. The official tax burden of a registered enterprise can be calculated based on this official tax data. Additionally, the extensive temporal span of the numerical data allows for the evaluation of both time series and panel data.

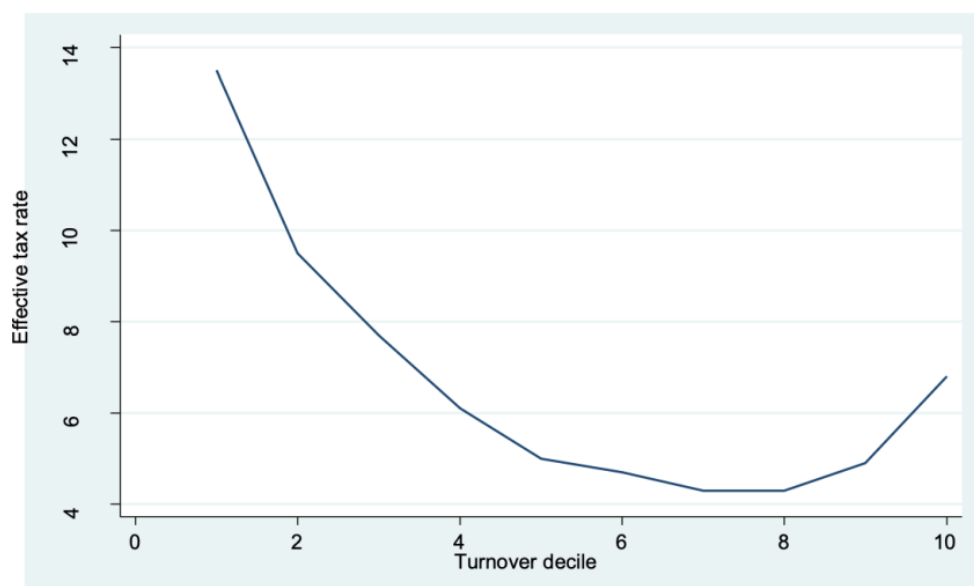
On the other hand, it is possible to use survey data. There are also such studies. For instance, Gauthier and Reinikka (2006) used a sample to calculate the tax burden of Uganda and calculated the burden of all types of corporate taxes (not just corporate income tax). A sample survey has the advantage of explaining the problem from many perspectives and allowing for the estimation of unreported income, but on the other hand, since taxes and income are sensitive topics, it is necessary to check whether the participants give the correct answer.

Calculating the tax burden based on financial statement data is an impractical method for our country due to limited information availability. Only a small number of companies disclose financial data, reflecting the underdeveloped capital market.

### **Analytical methodology**

Using the tax data, the most basic descriptive statistics such as average by sector, location, number of employees, and sales revenue can be calculated. At the same time, a diagram showing the relationship between tax indicators and other indicators will be used (see Figure 3).

**Figure 3. Relationship between effective tax rate and sales revenue for South African enterprises**

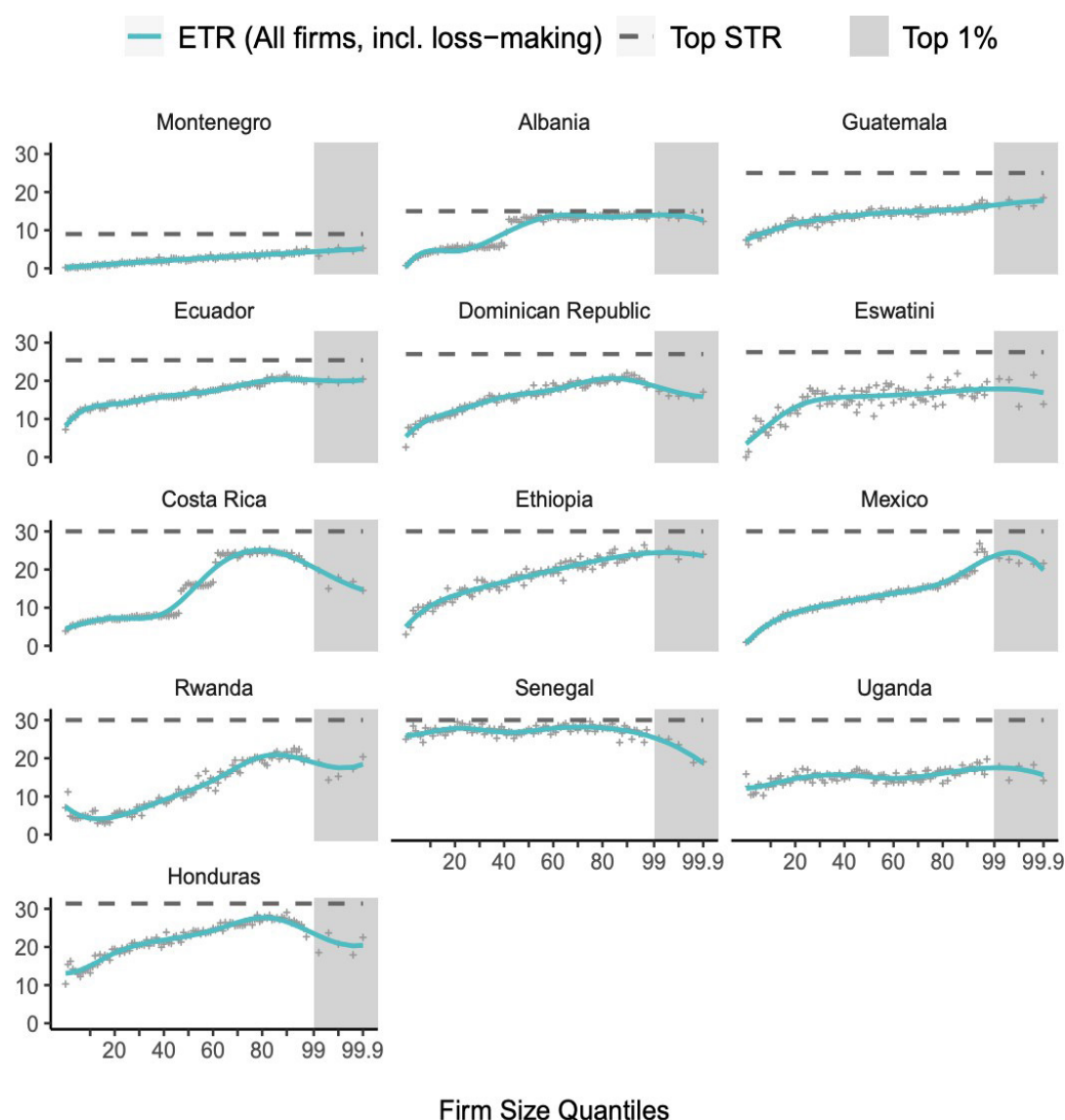


Source: Carreras et al (2017)



Furthermore, it is possible to determine the factors affecting the ETR by means of multivariate regression analysis. In this type of regression, it's common to include ETR as the dependent variable and firm size, firm age, capital capacity, fixed assets, leverage, foreign investment, foreign operations, sector fixed effects, and location or region fixed effects as the explanatory variables (Carreras et al., 2018; Bachas et al., 2023).

**Figure 4. Effective tax rate and enterprise size (example of 13 developing countries)**



Source: Bachas et al (2023)

## Research outcome

Carreras et al (2017) estimated the corporate tax burden in the Republic of South Africa using corporate taxes. In doing so, averages were calculated based on historical data. According to the research, the actual tax burden is less than the (nominal) 28 percent specified in the law. Enterprises pay relatively low taxes because of the tax credits, exemptions, deductions, and

depreciation methods for enterprises. Mascagni and Mengistu (2016) have also investigated the regressive nature of proportional taxation in the case of Ethiopia. The above two studies have concluded that large and small enterprises have a relatively lower tax burden than medium-sized enterprises.

For large enterprises, there are two effects: political influence (influencing decision makers and creating more favorable tax conditions) or political costs (large taxpayers are more in the public eye and therefore less likely to evade taxes) (Gupta and Newberry 1997). For developed countries, there is no univariate positive or negative correlation between enterprise size and tax burden.

On the other hand, several studies indicate that in emerging countries, large enterprises tend to employ tax reduction strategies more frequently. Moreover, they are able to create more favorable opportunities due to their close ties with politicians (Kim and Limpaphayom 1998, Guha 2007, Adhikari et al. 2006; Derashid and Zhang 2003, Wu et al. 2012). In countries like Malaysia, India, and China, large enterprises have discovered that they can leverage their political connections to secure lower tax rates. This effect is often attributed to these enterprises' significant role in the country's development.

According to a recent study by economists of the World Bank (Bachas et al., 2023), for 13 developing countries across Africa, Latin America, and Eastern Europe, small enterprises have low ETRs (due to low nominal rates), while large enterprises utilize tax incentives to pay minimal taxes. The study utilized official CIT data. Tax expenditures, such as credits and exemptions, provide clear advantages to both small and very large enterprises. Specifically, 30 percent of the largest enterprises with transaction income in the top 1 percent pay less than 15 percent of taxes, which is below the OECD/G20 Inclusive Framework's agreed minimum tax under Pillar II.

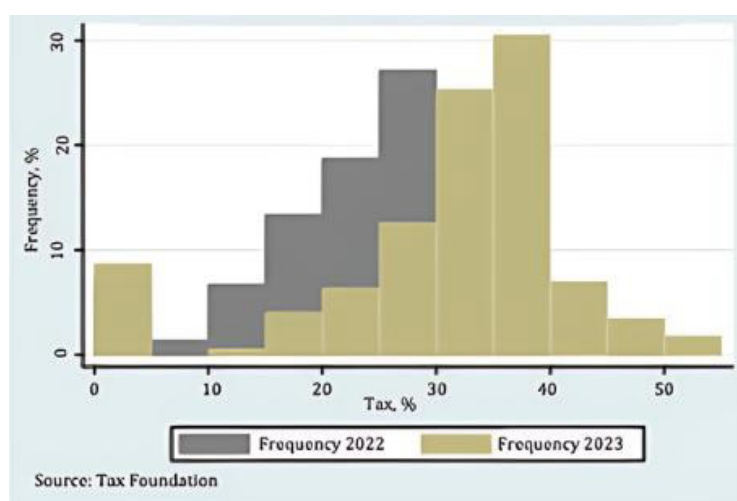
There are studies that compare the tax burden by industry aside from enterprise size. For instance, Xuerui Li & Tran (2016) compared the tax burden of the Australian enterprises in mining and other sectors using tax data from 2006-2009. They found that the mining sector has a low explicit tax burden (measured by current ETR).

Noor et al (2008) studied the actual tax burden of 294 listed companies in Malaysia from 2000 to 2004. According to these researchers, while the nominal tax rate is 28 percent, significant differences exist between sectors in the ETR. Specifically, companies in real estate, trade, services, and construction sectors faced higher effective tax rates compared to other sectors. The study also found that highly leveraged enterprises that invested substantially in fixed capital and operate abroad pay lower effective tax due to tax incentives.

### Comparative studies of tax burdens

Tax Foundation, a US-based research organization, conducted a comparative study on the tax burden using corporate tax data<sup>3</sup>. When comparing the corporate tax rates of 251 administrative units<sup>4</sup> with judicial authority as of 2022, about 60 percent, or 150 units, had a tax rate between 25 and 35 percent.

Figure 5. Global CIT rates, 2000 and 2022



In 2022, compared to 2000, distribution of statutory corporate tax rates has shifted left or decreased. The average statutory tax rate in 2022 has decreased from 29.3% to 22.3%, and the median rate has decreased from 31.5% to 25% (see Table 2).

Table 2. Average and median global CIT rates

	Number of jurisdictional administrative units covered	Tax average, %	Tax median, %
2000	251	29.33	31.50
2022	251	22.25	25.00

Source: Tax Foundation <https://taxfoundation.org>

Table 3 shows the average statutory tax rates in 2022 by region for the 180 jurisdictions with available GDP data. The average tax rate is the lowest in Asia (19.5 percent) and the highest in South America (28.4 percent). In terms of the average tax percentage weighted to GDP, Europe has the lowest at 23.6 percent, while South America has the highest at 32.6 percent.

<sup>3</sup> <https://taxfoundation.org>

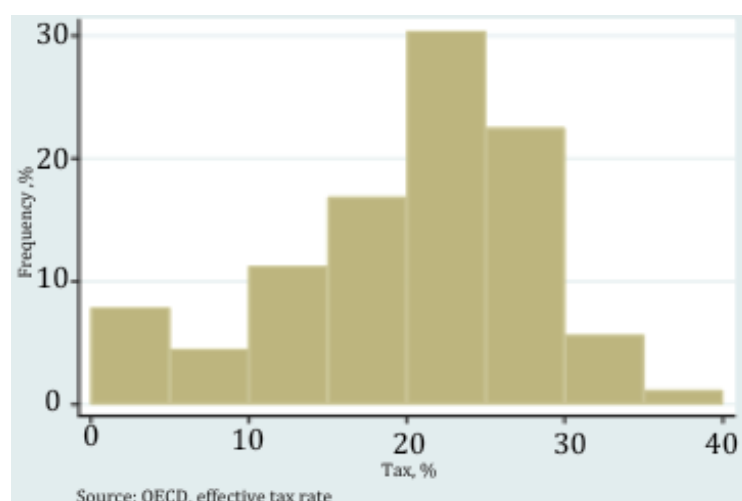
<sup>4</sup> It includes about 180 countries, and for some countries, the tax share has been separated into states or large administrative units. Together, these make a total of 251 units.

**Table 3. Average corporate tax rate by region, 2022**

	Average tax rate	Average tax rate weighted by GDP	Number of countries covered
Africa	27.60%	27.50%	50
Asia	19.52%	24.93%	47
Europe	19.74%	23.59%	39
North America	25.33%	26.13%	24
South America	28.38%	32.64%	12
G7	26.32%	26.22%	7
OECD	23.57%	25.83%	38
BRICS	27.40%	26.06%	5
EU27	21.16%	25.28%	27
G20	26.77%	26.24%	19
Total	23.37%	25.43%	180

Source: Tax Foundation <https://taxfoundation.org>

As of 2022, the average ETR of enterprises in 90 countries is 20.2 percent (see Table 4). In more than half of these countries, the ETR is between 20 and 30 percent (see Figure 6). Similar to the statutory corporate tax rate, the effective corporate tax rate is gradually decreasing. Between 2017 and 2022, the effective average tax rate decreased by 1.5 percentage points, from 21.7 percent to 20.2 percent.

**Figure 6. Average effective tax rate in 2022**


Source: OECD effective tax rate <https://stats.oecd.org>

Table 4. Effective tax rate

	Number of countries covered	Effective tax rate (average)	Effective tax rate (median)
2017	90	21.67	22.80
2022	90	20.16	22.35

Source: OECD, effective tax rate <https://stats.oecd.org>

In addition, there is a viewpoint that not only CIT burden, but also employers' SIC burden should be considered. The financial resources of social insurance systems differ from country to country, making direct comparisons difficult. For instance, Japan's social insurance system consists of pension, health insurance, long-term care insurance, workers' compensation insurance, and labor insurance. Japan, Germany, and France have relatively similar social security systems, with SIC being the main source of public funding. According to a comparison of six countries by the National Corporation Association of Japan, the SIC of enterprises are highest in France (33.7 percent) and lowest in the US (10.2 percent) (see Figure 7).

Figure 7. Employer and employee burden of SIC

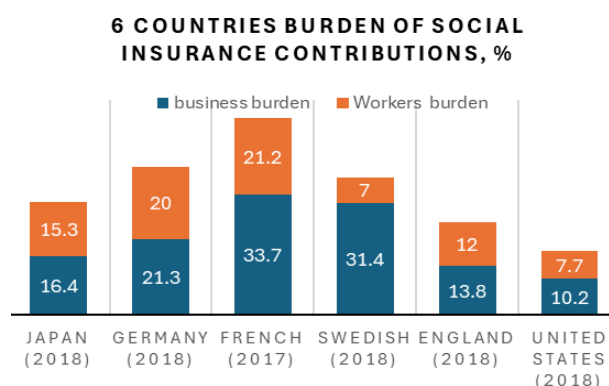
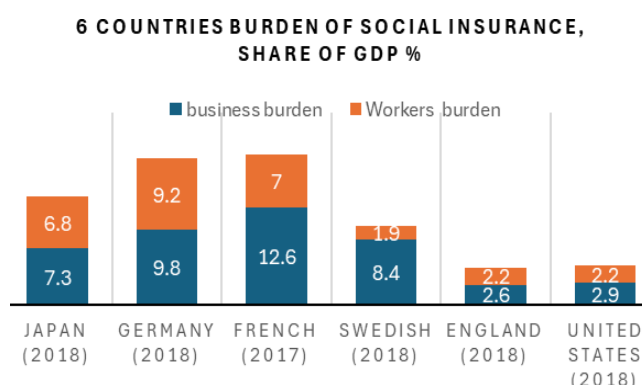


Figure 8. Burden of SIC on employers and employees and share of GDP



Source: Japan National Corporation Association 2019

Furthermore, looking at the SIC as a percentage of GDP, the burden in England and the US is relatively low, at 2.6 and 2.9 percent, respectively (see Figure 8). However, France has the highest burden of 12.6 percent.

In conclusion, the international methodologies for calculating tax burdens at both macroeconomic and enterprise levels have already been established, leading to a significant number of studies in this area. Research is predominantly conducted in developed countries, with relatively fewer studies in developing countries due to challenges related to data quality and methodology.

Regarding data collection, tax burdens can be calculated using official data collected from government agencies such as tax administrations or through sample surveys. Each method

has its own advantages and disadvantages. It is important to note that subjectivity may influence survey-based research. When reliable, information from tax administrations is generally preferred. In our study, we utilized administrative data to calculate Mongolia's tax burden.

A common finding from these studies is that there is a significant difference between the statutory tax rate (nominal rate) and the ETR, which depends on how tax credits and depreciation are calculated. Tax burden varies by countries depending on factors such as the size of the enterprise, the field of operation, location, and number of employees. In less developed countries, the burden on large enterprises is often lower, and taxes are generally regressive in nature.

The above studies have calculated the burden of CIT. According to this comparative estimate, the ETRs have been decreasing globally over the last 20 years, currently ranging between 20-30 percent for most countries, with an average rate of around 23 percent. Regionally, rates are lowest in Asia and relatively high in South America.

Finally, it should be noted that there are very few studies that include all types of burdens borne by enterprises, including indirect taxes and SIC. Therefore, there is essentially no research directly comparable to ours.

## 2.2. Corporate tax burden in Mongolia

### 2.2.1 Tax base

In Mongolia, as of 2022, there are 220,998 taxpayers registered under CIT with the MTA. In which, the trade sector accounts for 36.8 percent, the processing sector accounts for 6.9 percent, and the agricultural sector accounts for 4.5 percent (see Table 5).

*Table 5. Number of registered taxpayers, by sector*

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	3,974	5,432	5,820	6,313	6,842	7,465	8,192	9,139	10,080
Mining	1,021	1,697	1,828	2,147	2,495	2,638	2,673	2,760	2,910
Manufacturing	5,934	8,430	9,054	9,801	10,637	11,796	12,759	14,029	15,316
Electricity supply	209	267	287	313	322	348	351	354	364
Water supply	148	210	230	240	260	281	310	339	382
Construction	7,743	11,063	11,723	12,548	13,261	14,385	14,767	16,368	17,209
Trade	34,576	51,055	55,330	61,037	65,992	72,123	69,137	76,003	81,432
Transportation	1,700	2,453	2,681	3,106	3,559	4,155	4,729	5,778	6,627
Accommodation and food service	2,366	3,239	3,480	3,798	4,145	4,644	5,011	5,521	6,059
Information and communication	1,707	2,575	2,827	3,111	3,476	3,984	5,195	5,893	6,500
Finance	2,167	3,148	3,508	3,838	4,090	4,436	4,517	4,699	4,852
Real State	1,075	1,498	1,597	1,726	1,884	2,124	2,149	2,193	2,260
Science & Technology	4,428	6,467	6,932	7,683	8,370	9,409	10,948	11,999	13,090
Administrative and support service	3,762	5,862	6,430	7,251	8,042	9,211	10,440	12,100	13,101
Public administration	18	63	70	75	81	115	1,024	1,061	935
Education	1,035	1,569	1,749	1,940	2,139	2,520	5,366	5,655	5,924
Health	1,680	2,144	2,246	2,413	2,557	2,764	3,268	3,386	3,563
Arts	208	392	440	506	567	742	1,815	2,007	2,073
Other services	841	1,595	1,744	1,923	2,169	4,346	18,751	21,167	21,998
Other	50,798	7,533	7,539	7,158	6,681	6,086	4,397	4,300	6,323
Total	125,390	116,692	125,515	136,927	147,569	163,572	185,799	204,751	220,998

Source: Mongolian Tax Administration

Out of these enterprises, 149,411, which is 67.6 percent, filed their tax returns in 2022 (see Table 6). A total of 58,792 enterprises in the trade sector have filed their tax returns. In general, the number of tax returns filed by enterprises across all sectors is increasing each year. Between 2014-2022, the number of enterprises that filed tax returns increased threefold.

**Table 6. Number of enterprises that filed tax returns, by sector**

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	2,364	4,493	4,732	4,946	5,434	5,890	6,492	6,962	7,333
Mining	675	1,457	1,533	1,736	2,067	2,112	2,117	2,196	2,157
Manufacturing	3,450	6,648	6,949	7,203	7,967	8,745	9,544	10,076	10,547
Electricity supply	119	248	264	286	298	314	314	320	317
Water supply	92	181	194	201	220	234	251	269	299
Construction	4,676	8,522	8,656	8,643	9,356	10,062	10,785	11,478	11,694
Trade	20,926	38,434	40,700	42,862	47,361	51,385	53,782	56,898	58,792
Transportation	1,070	1,967	2,110	2,382	2,754	3,159	3,612	4,485	4,931
Accommodation and food service	1,453	2,668	2,834	2,973	3,271	3,608	3,849	4,083	4,285
Information and communication	1,020	1,883	1,995	2,104	2,431	2,763	3,432	3,858	4,085
Finance	1,388	2,567	2,831	3,007	3,182	3,415	3,450	3,477	3,387
Real State	608	1,295	1,345	1,386	1,529	1,699	1,706	1,671	1,668
Science & Technology	2,801	5,057	5,399	5,702	6,362	7,104	7,973	8,430	8,959
Administrative and support service	2,330	4,244	4,572	4,780	5,474	6,157	6,981	7,927	8,402
Public administration	4	7	8	7	9	11	190	97	102
Education	612	1,151	1,234	1,276	1,482	1,649	3,145	3,147	3,197
Health	1,041	1,955	2,055	2,173	2,330	2,472	2,632	2,606	2,620
Arts	109	256	280	301	341	442	948	1,001	1,039
Other services	433	919	968	1,015	1,272	1,989	11,521	13,354	14,188
Other	1,876	2,893	2,488	2,351	2,134	1,764	1,723	1,015	1,409
<b>Total</b>	<b>47,047</b>	<b>86,845</b>	<b>91,147</b>	<b>95,334</b>	<b>105,274</b>	<b>114,974</b>	<b>134,447</b>	<b>143,350</b>	<b>149,411</b>

Source: Mongolian Tax Administration



Among the enterprises that filed their tax returns in 2022, 875 were large, 2,613 were medium, 31,698 were small, and the remainder were micro-enterprises. Please refer to Tables X1 to X4 in Appendix 1 for a comparison of enterprises that have filed their tax returns by industry and size.

Detailed information on the number of enterprises that have filed their tax returns annually across 84 sub-sectors and classifications can be found in Appendix 2.

The total amount of taxes paid, as indicated by enterprise reports and inspections, increased by 3.5 times, reaching MNT 1,533 billion from 2014 to 2022.

**Table 7. CIT paid, by sector, in MNT billions**

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	1.4	2.1	0.8	1.6	1.8	2.3	2.0	2.8	8.8
Mining	220.7	282.9	244.1	529.0	741.1	870.3	884.7	915.4	1,019.4
Manufacturing	32.8	32.6	50.8	104.5	130.2	178.3	179.3	128.4	155.1
Electricity supply	1.8	2.7	5.3	10.0	9.7	7.8	5.4	4.1	8.5
Water supply	0.4	0.8	0.7	0.5	0.7	1.3	0.9	0.7	1.1
Construction	38.6	30.0	13.5	34.9	38.9	68.7	56.4	86.3	80.2
Trade	59.0	64.5	47.7	104.0	142.0	206.9	147.4	190.8	297.8
Transportation	16.3	10.8	7.2	25.4	36.9	41.0	20.4	27.1	67.0
Accommodation and food service	8.0	8.2	9.6	14.5	11.3	13.3	9.1	8.3	11.5
Information and communication	45.7	32.5	27.7	42.4	48.1	65.7	48.0	74.5	89.6
Finance	123.3	174.7	73.3	85.3	168.9	183.8	111.9	217.6	330.5
Real State	15.4	10.8	8.8	9.2	11.8	18.9	12.0	13.1	20.0
Science & Technology	27.4	7.9	13.8	14.8	15.4	20.2	14.0	15.4	22.0
Administrative and support service	7.3	3.0	2.5	7.1	7.0	6.5	5.5	6.7	11.2
Public administration	0.1	0.1	0.0	0.3	0.2	0.5	0.2	0.2	0.2
Education	0.8	0.8	0.7	0.8	1.5	1.4	0.9	0.8	2.1
Health	3.0	2.5	1.8	2.7	4.2	5.3	3.7	4.2	8.8
Arts	0.1	0.1	0.1	0.8	0.3	0.2	1.4	1.2	2.1
Other services	0.5	1.9	14.8	19.8	0.5	0.8	0.5	0.9	2.0
Other	3.0	5.3	2.7	3.8	6.6	8.2	7.7	1.6	0.6
<b>Total</b>	<b>605</b>	<b>674</b>	<b>525</b>	<b>1,011</b>	<b>1,377</b>	<b>1,701</b>	<b>1,511</b>	<b>1,700</b>	<b>2,138</b>

Source: Mongolian Tax Administration

According to enterprise reports, the trade sector recorded the highest sales revenue (see Table 8). In 2022, the trade sector contributed 41 percent of the total reported sales revenue, whereas the mining sector accounted for 16 percent. In contrast, sales revenue from enterprises in the public administration sector was the lowest, comprising only 0.06 percent. Total sales revenue increased by 39 percent compared to 2021.

*Table 8. Sales revenue reported by enterprises, by sector, in MNT billions*

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	123.5	238.0	351.6	291.6	349.7	400.2	478.2	667.8	895.3
Mining	5,378.8	7,017.2	8,509.0	11,477.8	14,712.4	18,357.0	15,317.7	17,878.3	21,770.3
Manufacturing	2,013.4	3,160.7	3,686.6	5,500.8	6,944.7	10,360.8	7,642.4	8,530.5	11,493.5
Electricity supply	927.6	1,253.8	1,928.7	2,406.2	2,902.4	4,308.7	3,548.9	4,003.4	4,299.2
Water supply	128.5	231.1	221.2	271.9	304.9	362.6	359.5	371.4	497.2
Construction	2,002.3	3,440.8	3,663.2	4,038.5	6,281.8	8,034.9	6,968.4	7,567.5	9,445.5
Trade	6,387.4	12,222.9	12,921.5	17,639.5	24,665.3	30,944.6	28,221.1	37,428.7	55,195.4
Transportation	1,173.1	1,525.2	1,583.5	2,230.6	2,827.9	3,684.5	3,011.0	4,097.4	6,891.6
Accommodation and food service	241.3	494.0	609.4	910.8	1,005.6	1,453.2	858.6	1,283.0	1,780.4
Information and communication	320.5	946.2	1,082.6	1,213.0	1,446.3	2,170.1	1,835.6	2,279.0	2,658.9
Finance	2,599.4	4,080.6	5,349.3	5,122.1	6,080.1	10,397.5	7,573.4	8,277.6	12,037.5
Real State	328.4	416.5	459.6	470.7	546.7	707.4	628.3	720.4	1,053.8
Science & Technology	424.2	750.9	1,269.7	922.7	1,090.2	1,341.8	1,685.6	1,662.0	2,414.9
Administrative and support service	321.0	483.7	508.4	702.2	881.8	975.6	731.6	1,045.4	2,089.8
Public administration	6.4	22.3	11.9	28.5	17.7	25.0	33.5	85.4	94.0
Education	52.5	88.1	84.8	96.1	113.5	155.1	324.2	496.1	757.7
Health	115.0	241.7	282.1	344.7	417.2	521.8	570.4	870.6	1,579.2
Arts	7.7	21.2	34.3	57.8	40.7	48.1	92.9	91.6	150.8
Other services	19.9	44.3	52.6	62.1	79.4	94.4	324.0	472.3	728.2
Other	123.7	192.5	205.4	256.8	268.5	256.7	365.2	170.3	94.4
<b>Total</b>	<b>22,694</b>	<b>36,871</b>	<b>42,815</b>	<b>54,044</b>	<b>70,976</b>	<b>94,600</b>	<b>80,570</b>	<b>97,998</b>	<b>135,927</b>

Source: Mongolian Tax Administration

Taxable income reported by enterprises is presented by sector in Table 9. Due to the impact of loss-making enterprises, the net taxable income in certain sectors is negative. Excluding loss-making enterprises from the calculation, the mining, trade, and financial sectors exhibit the highest taxable income (see Appendix 10).

*Table 9. Net taxable income, by sector, in MNT billions*

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	11.7	-35.8	-12.4	-36.4	-3.6	-12.0	24.1	60.6	113.3
Mining	31.1	-151.4	-2749.0	849.9	1962.3	3100.4	2047.8	2451.1	5123.9
Manufacturing	-104.4	-45.3	157.6	277.9	550.2	865.4	610.1	643.4	856.8
Electricity supply	-79.3	-25.9	-33.8	-21.7	-26.5	-66.6	-100.5	-47.4	-61.3
Water supply	2.0	-16.8	-17.4	-13.5	-9.0	-20.0	-39.0	-19.7	-40.5
Construction	-2.0	-126.4	-19.8	47.7	-52.4	176.7	566.7	490.3	525.7
Trade	71.8	77.3	77.1	354.9	582.6	764.8	1214.2	1298.3	2507.1
Transportation	-28.9	-104.0	66.0	139.6	96.6	178.8	-32.5	-35.7	533.4
Accommodation and food service	9.2	-19.5	-27.5	-262.5	-43.9	-20.0	-43.7	11.7	90.2
Information and communication	38.0	106.8	90.7	100.7	177.5	288.4	254.5	399.7	451.2
Finance	144.4	79.6	7.7	-766.6	-437.5	316.7	529.5	1249.8	1672.2
Real State	42.0	45.8	45.7	61.1	78.4	97.8	86.2	126.7	184.4
Science & Technology	-36.5	-113.8	-19.2	-42.2	17.8	2.9	70.6	105.5	94.4
Administrative and support service	-0.5	-22.2	-16.5	-2.3	7.0	27.5	31.3	49.5	106.8
Public administration	2.1	3.4	-0.1	3.1	1.8	2.6	-0.2	-1.7	-2.0
Education	0.0	3.5	3.4	5.9	5.0	9.0	-28.5	-47.3	-90.0
Health	10.8	-1.8	-13.3	-14.5	23.6	24.1	14.5	8.9	35.7
Arts	-4.0	-9.5	-28.6	-7.5	-19.1	-15.3	-7.9	-1.3	15.2
Other services	0.4	-0.3	-0.5	2.0	1.9	-5.0	-36.4	-114.2	-111.0
<b>Other</b>	<b>-21.1</b>	<b>-24.5</b>	<b>-9.7</b>	<b>8.9</b>	<b>21.1</b>	<b>7.9</b>	<b>1.4</b>	<b>-4.9</b>	<b>11.9</b>

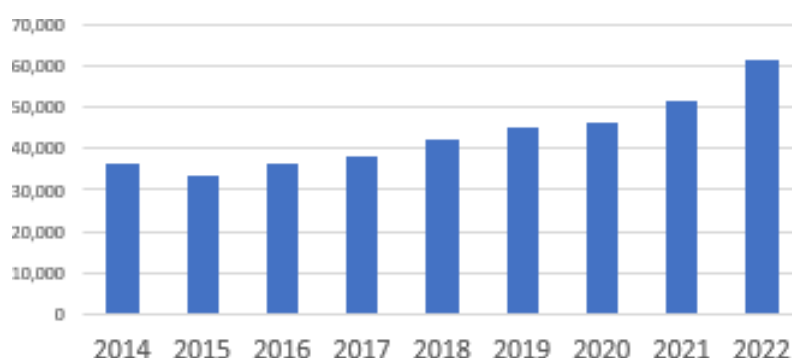
Source: Mongolian Tax Administration

## 2.2.2 Total tax burden

The methodology of calculating the tax burden as a percentage of taxable income predominates in international research. Consequently, our calculations will adhere to this methodology.

When calculating the tax burden, the taxable income is defined for profitable enterprises. Although number of profitable enterprises was slow in growth until 2020 due to the impact of COVID-19, there has been a sharp upward trend in recent years (see Figure 9).

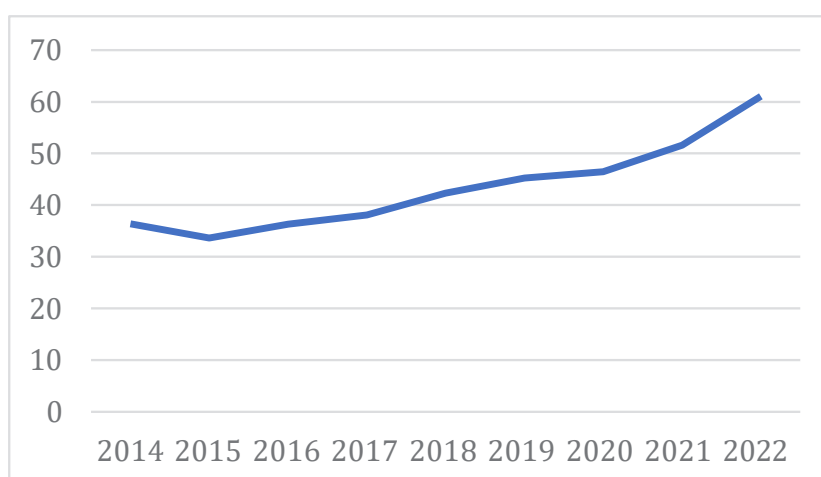
**Figure 9. The number of enterprises that have operated profitably and paid income tax.**



Source: Mongolian Tax Administration

Not only did the number of profitable enterprises has risen, but total sales revenue also experienced a significant increase. The total sales revenue surged from MNT 44 trillion in 2017 to MNT 116 trillion by the end of 2022, reflecting increased economic activity in the post-COVID-19 years (see Figure 10). 89 percent of this growth is explained by the growth of trade, mining, finance, construction, manufacturing, and transportation sectors.

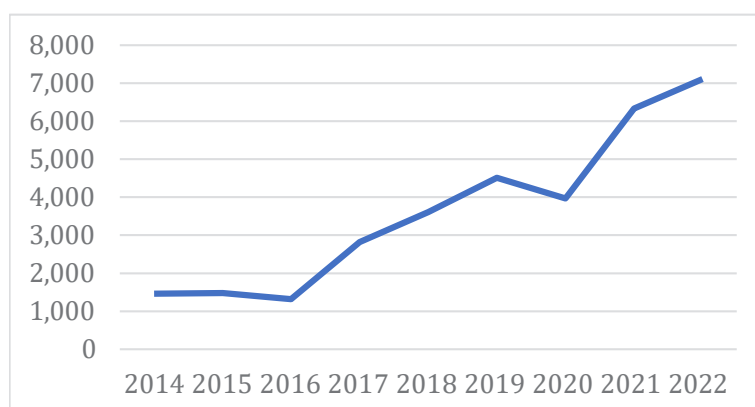
**Figure 10. Profitable enterprises sales revenue, in MNT trillions**



Source: Mongolian Tax Administration

Thus, in recent years, the tax base has expanded significantly in terms of the number of entities and total sales revenue. As a result, total tax payments sharply increased, reaching MNT 7.1 trillion by the end of 2022, marking a 2.5-fold increase over the past five years (see Figure 11). 89 percent of this growth is attributed to the trade, mining, finance, construction, manufacturing, and transportation sectors. The total tax paid excludes import VAT and customs duty, representing the sum of taxes collected by the MTA.

**Figure 11. Total taxes paid by profitable enterprises, in MNT billions**

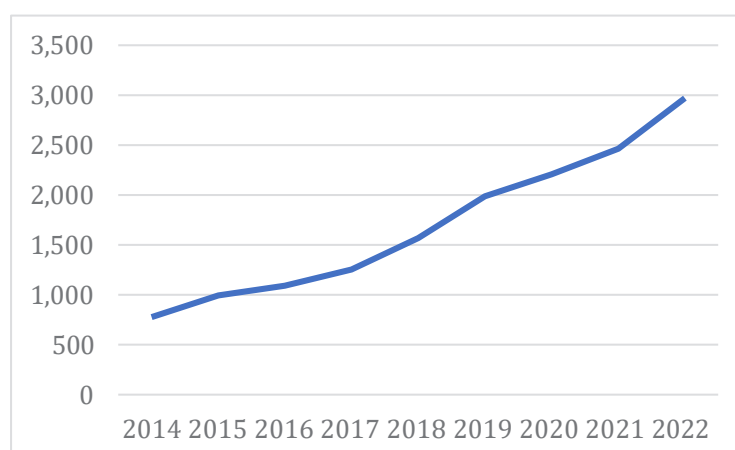


Source: Mongolian Tax Administration

Accordingly, the expansion of the tax base in recent years is primarily attributed to the growth of these sectors.

SIC payments have also shown significant growth in recent years (Figure 12). From MNT 1.25 trillion in 2017, it has increased by 2.4-folds reaching MNT 2.97 trillion by the end of 2022.

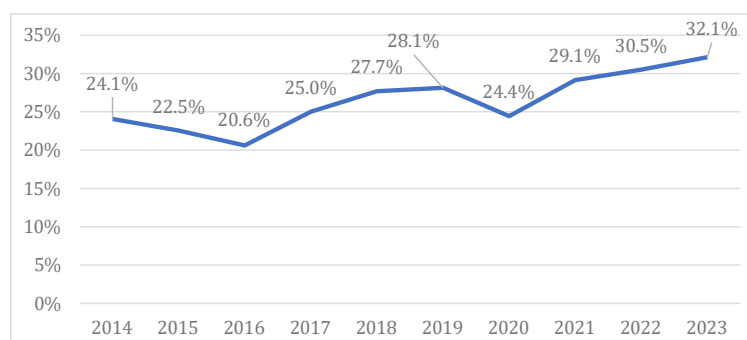
**Figure 12. Payment of SIC, in MNT billions**



Source: Mongolian Tax Administration

Taking various taxes, fees, and SIC into account, the total burden amounted to 32.1 percent of GDP by the end of 2023 (see Figure 13). Since 2014, this burden has been highly volatile, with a notable upward trend in recent years, particularly since 2020.

**Figure 13. Share of total tax revenue in GDP**



Source: Researchers' estimate based on NSO data

Precisely, in this calculation, CIT, PIT, SIC, VAT imposed on domestic purchases (domestic VAT), Excise Tax imposed on domestic purchases (domestic ET), VAT imposed on imported goods (imported VAT), Excise Tax imposed on imported goods (imported ET), Customs Duty, Mineral Royalty Payment (MRP) and other taxes and payments are included (see Table 11). According to this breakdown, total tax revenue is derived from various sources. Although the contribution of different taxes to the total tax revenue is relatively consistent, CIT, SIC, import VAT, and MRP are the predominant sources.

**Table 10. Breakdown of total tax revenue in 2023, in MNT billions**

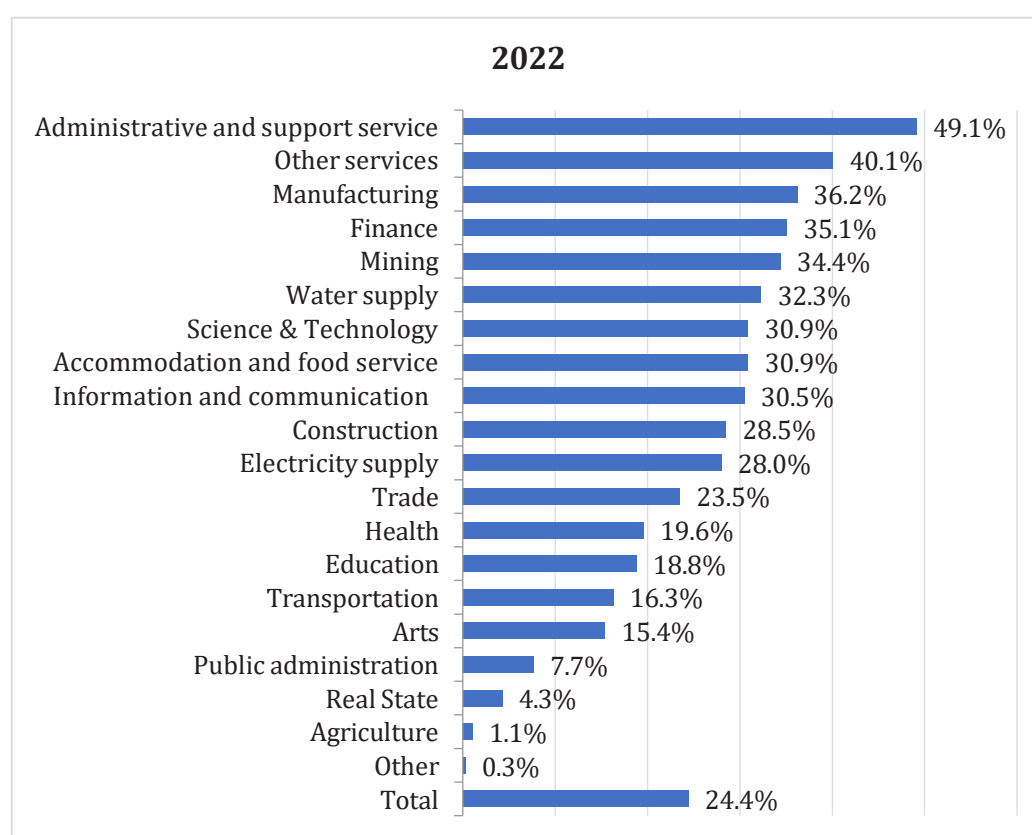
Taxes	Amount	Share of GDP
CIT*	4,094.2	5.9%
PIT	1,797.8	2.6%
SIC	3,942.8	5.7%
VAT (domestic)	1,615.2	2.3%
Excise Tax (domestic)	274.1	0.4%
VAT (import)	3,158.2	4.6%
Excise Tax (import)	515.9	0.7%
Customs duty	1,464.1	2.1%
Mineral royalty payment*	4,150.6	6.0%
Other taxes and payments	1,113.8	1.6%
<b>Total tax revenue</b>	<b>22,126.7</b>	<b>32.1%</b>
Non-tax revenue and assistance	1,767.2	2.6%
Future Heritage Fund	416.2	0.6%
<b>Total budget revenue</b>	<b>24,310.1</b>	<b>35.3%</b>

Source: Researchers' estimates based on NSO data

Note: \* Mineral royalty payment and CIT for 2023 - Derived from the preliminary budget performance.

At the macroeconomic level, we calculate the total taxes and SIC. However, sector estimates exclude import VAT and customs duties, resulting in an incomplete calculation of the overall burden on enterprises. When calculated by sector, by the end of 2022, total burden on administrative support (49.1 percent), other services (40.1 percent), manufacturing, finance, and mining sectors exceed 34 percent (Error! Reference source not found.). A caveat here is that this burden is calculated based on the total value added produced by the sector or the sectoral GDP.

Figure 14. Share of total taxes and SIC in GDP, by sector, 2022



Source: Mongolian Tax Administration

### 2.2.3 CIT burden

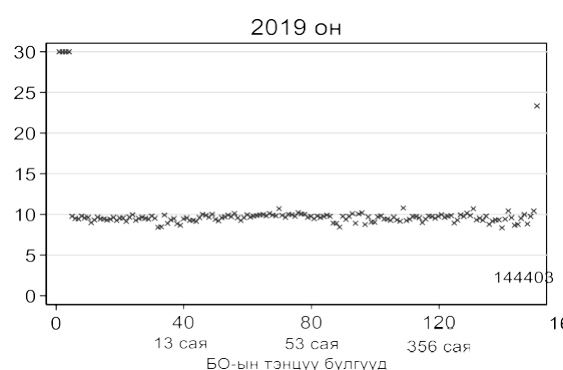
We calculated the tax burden on enterprises using two methods. First, the tax imposed on the enterprises was calculated as a ratio of taxable income. This method provides a more convenient way to calculate the tax burden. This is because CIT is calculated based on the enterprise's taxable income, which is derived from total sales revenue minus operating expenses, tax exemptions, and credits. This method better reflects the tax burden borne by the enterprise. If the taxable income is negative or if the enterprise incurs a loss, it means that no tax burden will be incurred. Therefore, based on figures provided by the MTA, enterprises were assessed based on pre-tax profits and losses. Depending on the availability of data and the form used to obtain it, the data of the SIC and the CIT are not compatible

with each other. Therefore, It is not possible to calculate the combined burden of taxes and SIC for an enterprise.

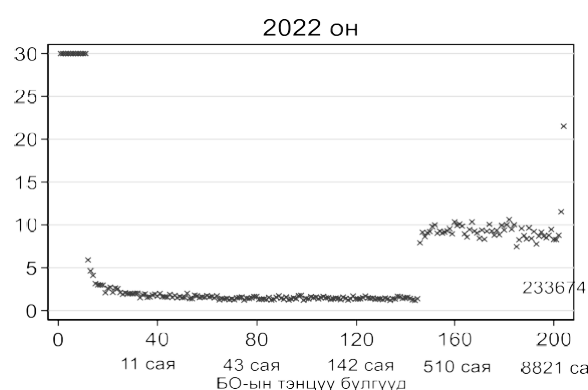
Therefore, we used alternative method of comparing the burden of SIC and CIT to the total income of the enterprises. In this case, we can demonstrate the extent to which CIT and SIC are burdening the enterprise. According to Table 10, CIT constituted 5.8 percent of GDP or 18.7 percent of total tax revenue by the end of 2023.

To calculate the tax burden, we have listed enterprises with positive taxable income from lowest to highest based on total sales revenue. Afterward, the 300 enterprises were grouped together. For instance, in 2023, a total of 61,064 enterprises with positive taxable income were divided into 204 groups. The relevant numerical data for this research was provided and submitted by the MTA.

**Figure 15. Effective tax rate of CIT, by sales revenue group, 2019**



**Figure 16. Effective tax rate of CIT, by sales revenue group, 2022**



Source: Mongolian Tax Administration

When calculating the burden of CIT as a ratio of tax to taxable income, it fluctuated around 10 percent until 2019 (see Figure 15). However, due to changes in tax laws in 2020, by 2022, as depicted in Figure 16, the average income tax burden for 39,900 enterprises with annual sales revenue ranging from MNT 370 thousand to MNT 306 million is 2 percent.

However, the average income tax burden for 17,100 enterprises with annual sales revenue ranging from MNT 318 million to MNT 3 billion was 11 percent. The tax burden for the 300 enterprises with the highest sales revenue, averaging more than MNT 234 billion, was 23 percent (see Figure 16).

Thus, when examining the CIT tax burden, enterprises with annual sales of less than MNT 300 million bear a burden equivalent to only 2 percent of their taxable income, with the tax imposed on these enterprises constituting 0.5 percent of the total tax collected. On the other hand, enterprises with an revenue of up to MNT 3 billion bear a burden equal to 11 percent of their taxable income, and the tax imposed on these enterprises accounted for 19.8 percent of the total tax collected. The tax imposed on the largest 300 enterprises accounted for 79.7 percent of the total tax collected. This is shown in the following table (see Table 11).



Table 11. Tax burden as of 2022

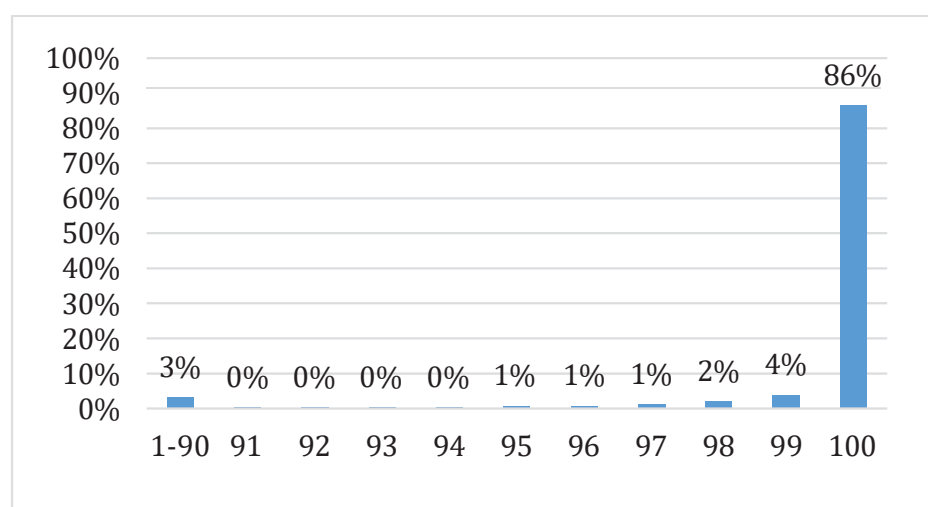
Average annual sales revenue /MNT/	Number of enterprises	Average CIT burden	Imposed CIT /MNT billion/	Share in total imposed CIT
More than 3 billion	300	23%	2,230	79.67%
318 million to 3 billion	17,100	11%	555	19.82%
370 thousand to 306 million	39,900	2%	14	0.5%
Less than 198 thousand	3,764	-	-	-
<b>TOTAL</b>	<b>61,064</b>		<b>2,799</b>	

Source: Mongolian Tax Administration

As evident from this table, the primary source in the CIT revenue is large enterprises, which bear a significantly higher tax burden compared to smaller enterprises. Furthermore, it is noteworthy that the sales revenue of MNT 318 million serves as a break even point. In other words, the tax burden increases sharply from 11 to 23 percent for enterprises with higher sales revenue.

The following figure also illustrates that large enterprises bear a significant tax burden and contribute the majority of tax revenue (see Figure 17). As depicted in this figure, 1 percent of enterprises with the highest sales revenue contribute 86 percent of the total CIT revenue. This trend has persisted since 2014.

Figure 17. Share of CIT paid in 2022, by sales revenue group



Source: Mongolian Tax Administration

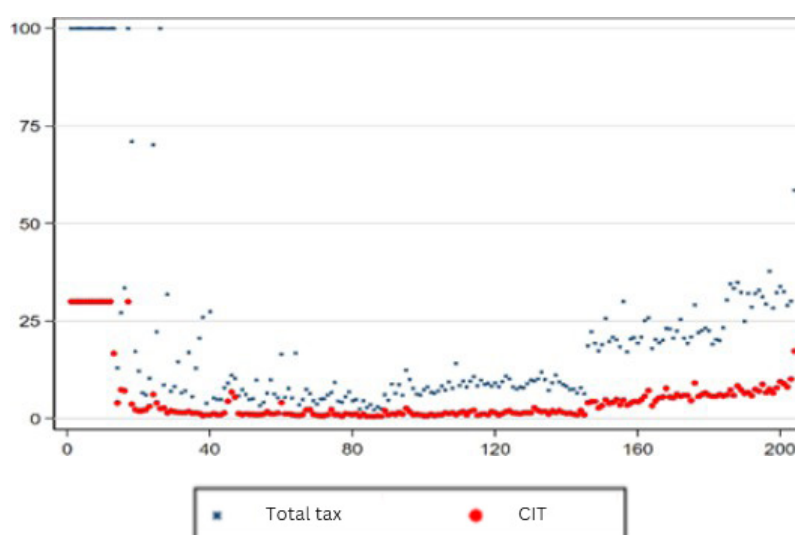
#### 2.2.4 Other taxes and total tax payment

As mentioned earlier, CIT is one of the primary sources of budget revenue, but other taxes also play an important role.

Based on numerical data provided by the MTA for this research, the “total tax” paid by enterprises was also calculated. Total tax includes the sum of all taxes paid by enterprises to the tax administration. PIT withholding tax was included, even though it is unreasonable to classify it as the tax burden of the business entity.

Thus, when calculating the total tax payments, as of 2022, it is evident that payments by large enterprises are higher than those of other groups. For instance, due to changes made to the tax law in 2020, enterprises with an average sales revenue of more than MNT 318 million will pay 22 percent or more of their taxable income in taxes, of which an average of 11 percent is CIT. It is observed that as the sales revenue of these enterprises increases, their tax payments also increase (see Figure 18). However, for the largest 300 enterprises, the total tax payment was the highest, constituting 59 percent of their taxable income. It is also important to note that while tax payments tend to increase with higher sales revenue, this burden also varies depending on the sector. In our country, sectors such as mining, trade, finance, and manufacturing are the largest in terms of taxable income. These sectors contribute the most to excise tax, VAT, and PIT, thereby shouldering the growing tax burden.

**Figure 18. Total tax and CIT burden**



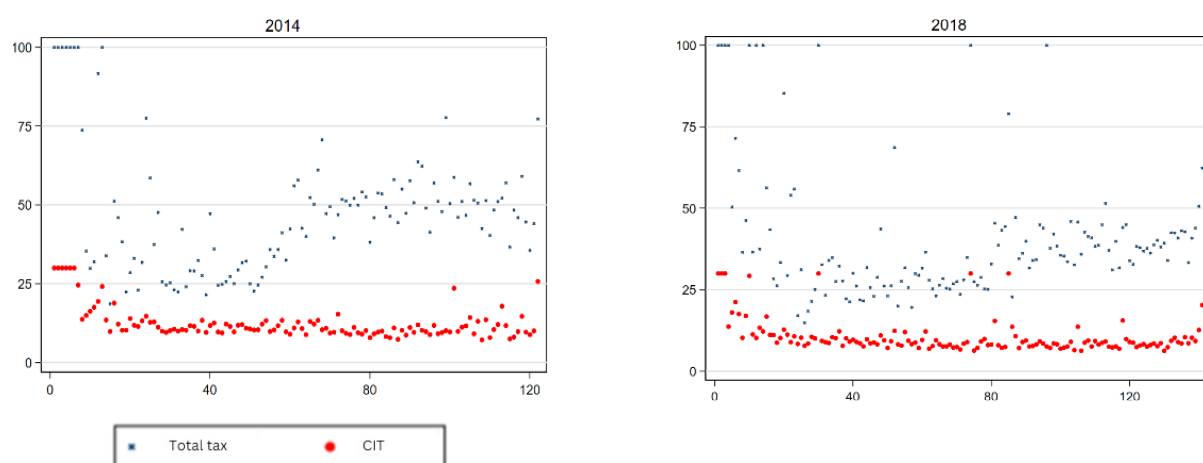
Source: Mongolian Tax Administration

For enterprises with an average annual sales revenue of less than MNT 318 million, the tax payment was relatively low, amounting to an average of 12 percent of their taxable income. However, for enterprises with low sales revenue, the tax payment is high because the taxable income is low.

Total tax paid has generally decreased over time (see Figure 19). It can be observed that as of 2014, the tax paid by all enterprises (with sales revenue exceeding MNT 100 million) averaged 45 percent of their taxable income, but by 2018, it had decreased to 41 percent. In other words, until 2020, there was a general downward trend in tax payments.

However, after regular payments were made, this downward trend continued following the aforementioned tax changes.

**Figure 19. Total tax payments for 2014 and 2018**



Source: Mongolian Tax Administration

As a caveat, total tax may not adequately reflect the tax burden. Total tax refers to the total amount transferred to the tax administration by the enterprise, but it does not necessarily reflect the burden borne by the business entity. For instance, taxes such as PIT, SIC, import and domestic VAT are not directly burdened on the enterprise. Therefore, it is necessary to further improve this calculation and calculate the tax burden by separating the taxes that apply to the enterprise.

### 2.2.5 CIT burden across sectors

We calculated the tax burden based on the enterprise's sales revenue and taxable income. In addition, the tax burden can be calculated by sector. In other words, it is possible to show the tax burden borne by enterprises across sectors.

We have utilized the economic sectors classification approved by the joint order 319 a/160 of the Minister of Finance and the Chairman of the National Statistical Office dated December 31, 2018, for our research. According to this order, economic activities are classified into the following industries (see Table 12).

**Table 12. Sector classification**

A	Agriculture, forestry, fishing and hunting
B	Mining and quarrying
C	Manufacturing
D	Electricity, gas, steam and air conditioning supply
E	Water supply; sewerage, waste management and remediation activities
F	Construction
G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Transportation and storage
I	Accommodation and food service activities
J	Information and communication
K	Financial and insurance activities
L	Real estate activities
M	Professional, scientific and technical activities
N	Administrative and support service activities
O	Public administration and defence, compulsory social security
P	Education
Q	Human health and social work activities
R	Arts, entertainment and recreation
S	Other service activities
T	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
U	Activities of extraterritorial organizations and bodies

*Source: Joint order of the Minister of Finance and the Chairman of the National Statistics Office, December 31, 2018, Number 319 A/160*

Total taxable income increased from MNT 2.25 trillion in 2014 to MNT 15.35 trillion in 2022. In particular, this growth intensified after 2019 and increased by 120 percent in just 4 years (see Table 13).

Table 13. Taxed income by sector

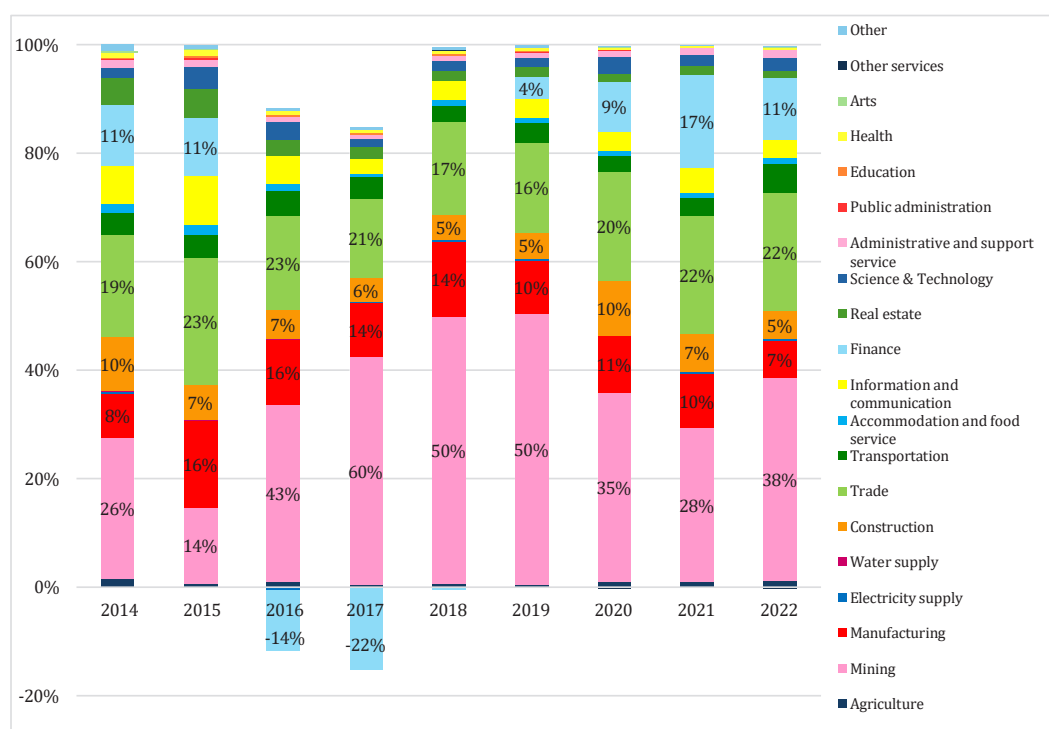
	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	36.7	10.4	24.6	20.4	37.4	32.4	71.0	97.0	175.6
Mining*	584.	220.	806.5						
Manufacturing	180.2	250.3	297.1	459.4	794.7	702.4	849.6		
Electricity	8.2	2.3	(15.3)	6.8	20.4	14.6	4.1	52.7	30.4
Water supply	4.7	1.9	1.4	3.7	5.7	6.4	(2.6)	7.4	18.9
Construction*	222.7	102.5	132.1	199.6	262.8	344.8	812.3	689.8	783.8
Trade*	421.4	366.3	430.5	679.0	989.2				
Transportation	94.4	66.2	112.3	181.7	165.3	257.2	230.5	347.8	837.5
Accommodation and food service	36.5	31.2	35.7	25.6	66.8	74.2	78.4	95.5	153.8
Information and communication	159.5	140.2	123.7	135.0	204.4	236.2	288.7	446.4	527.7
Finance*	249.7	169.0	(273.9)	(700.1)	(23.5)	296.9	746.2		
Real State	113.9	83.4	75.3	94.1	104.4	121.2	122.8	149.5	213.0
Science & Technology	39.6	63.3	79.8	66.0	111.0	130.4	242.6	221.6	342.9
Administrative and support service	33.1	23.1	24.6	38.4	52.5	65.6	101.8	118.8	225.4
Public administration	2.9	3.5	0.7	3.1	2.2	2.6	0.0	2.0	(2.0)
Education	6.7	7.4	6.8	9.6	10.7	11.3	(5.3)	6.2	(21.5)
Health	24.6	17.3	17.6	29.5	39.3	45.0	39.1	29.1	67.8
Arts	0.4	0.5	0.5	0.9	1.5	1.7	10.1	8.8	26.7
Other services	3.8	2.7	2.4	3.7	4.9	4.3	(12.5)	(14.6)	(22.4)
Other	25.0	11.1	10.1	18.8	31.7	35.1	12.7	2.1	17.1
<b>Total</b>		<b>1,57</b>	<b>1,892</b>	<b>3,211</b>	<b>5,715</b>	<b>7,079</b>	<b>8,052</b>	<b>10,031</b>	<b>15,352</b>

Source: Source: Mongolian Tax Administration

Notes: \*The sectors comprising 90 percent since 2014

78 percent of the total taxable income originates from the mining, trade, finance and manufacturing sectors, indicating that these sectors yield substantial returns compared to other sectors. Including transportation, construction, and information communication, these seven sectors, which have demonstrated the highest performance since 2014, collectively account for 90 percent of the total taxable income (see Figure 20).

Figure 20. The percentage share of sectors in the total taxable income



Source: Mongolian Tax Administration

Reflecting the economic structure of our country, the aforementioned 7 sectors collectively accounted for 95 percent of the total taxes imposed by the end of 2022, with the four primary sectors—mining, trade, finance, and manufacturing—contributing 84.7 percent. These 7 sectors accounted for more than 90% since 2014 (see Table 14). However, it is noteworthy that the mining sector alone accounts for 50 percent.

Table 14. Imposed income tax, in MNT billions

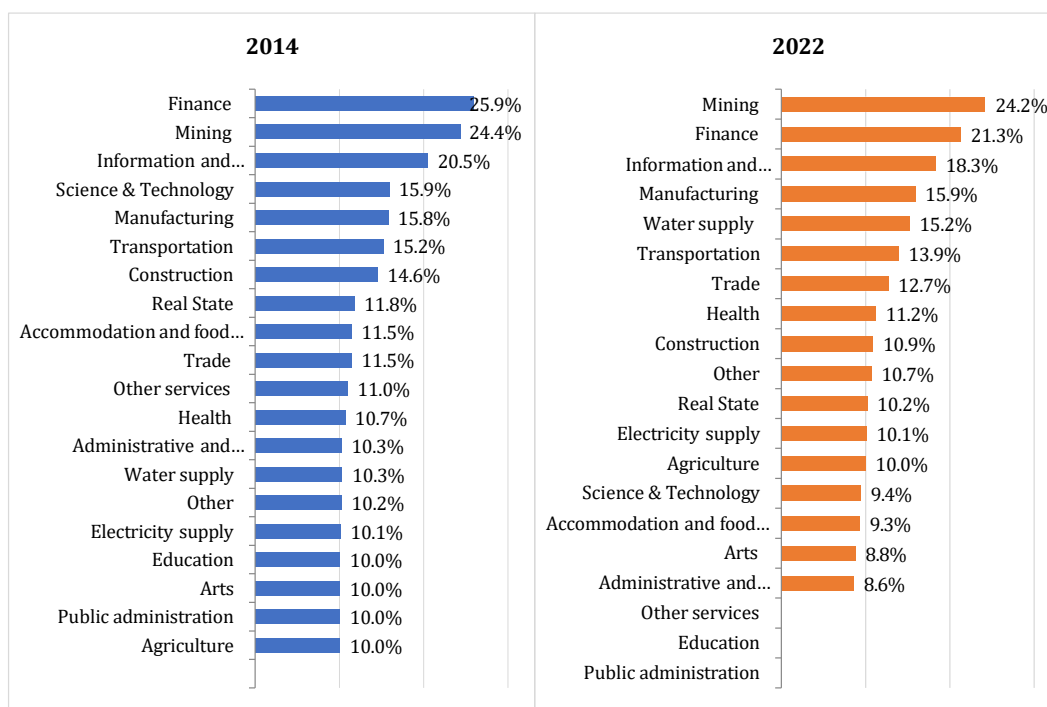
	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Mining*</b>	<b>142.9</b>	<b>55.2</b>	<b>191.3</b>	<b>474.4</b>	<b>694.6</b>	<b>859.9</b>	<b>661.4</b>	<b>669.1</b>	<b>1,402.9</b>
Trade*	48.7	52.1	51.9	93.2	148.5	174.5	174.3	266	426.2
Finance*	64.7	64.2	16.7	23.9	86.4	114.6	144.2	252.4	374.6
Manufacturing*	28.5	46.7	58.8	93.1	169.3	143.5	154.8	174.6	169.2
Transportation*	14.3	9.2	19.1	30.7	23.4	45.6	23.7	38.1	116.1
Information and communication	32.7	28.3	24.1	28	41.4	48.5	51.1	80.2	96.7
Construction*	32.4	12.7	18.1	29.7	39.3	55	120.3	88.7	85.2
Science & Technology	6.3	8.5	14.9	7.4	14	16	27.3	19.8	32.4
Real State	13.4	10.2	8.2	10.7	11.2	13.4	12.6	15.5	21.7
Administrative and support service	3.4	2.4	2.6	4.4	5.4	7.4	9	8.7	19.5
<b>Agriculture</b>	<b>3.7</b>	<b>1.1</b>	<b>2.5</b>	<b>2.1</b>	<b>3.8</b>	<b>3.4</b>	<b>5.4</b>	<b>7.8</b>	<b>17.6</b>
Accommodation and food service	4.2	3.4	4.4	6.4	8.6	9.1	8	9.3	14.3
Health	2.6	1.7	1.8	3	4	4.7	4.7	6.9	7.6
Electricity	0.8	0.8	3.4	2.9	3.7	5	2.1	8.7	3.1
Water supply	0.5	0.2	0.2	0.4	0.6	0.7	0.5	0.7	2.9
Education	0.7	0.7	0.7	1.1	1.1	1.1	1.6	1.4	2.8
Arts	0	0	0.1	0.1	0.1	0.2	1.1	1	2.3
Other services	0.4	0.3	0.2	0.4	0.5	0.5	1.3	1.8	2.3
Other	2.5	1.2	1.1	2.7	3.8	4.9	1.6	0.2	1.8
Public administration	0.3	0.3	0.1	0.3	0.2	0.3	0.1	0.2	0.3
<b>Total</b>	<b>403</b>	<b>299.</b>	<b>420</b>	<b>814.</b>	<b>1,260.</b>	<b>1,508.</b>	<b>1,405.</b>	<b>1,650.</b>	<b>2,799.</b>

Source: Source: Mongolian Tax Administration

Notes: \*The sectors comprising 90 percent since 2014

Thus, when calculating the tax burden by comparing the income tax imposed on the sectors with the taxable income of the sectors, the following results are obtained as of 2014 and 2022 (see Figure 21. CIT burden in 2014 and 2022, by sectorFigure 21).

*Figure 21. CIT burden in 2014 and 2022, by sector*



Source: Source: Mongolia's Tax Administration

According to Figure 21, as of 2022, the mining sector bears the highest income tax burden at 24.2 percent. This is near the ceiling set by tax law changes in 2020, where enterprises with incomes exceeding MNT 6 billion face a 25 percent income tax rate. Compared to other sectors, the mining sector incurs significant capital and operational expenses, yet it generates substantial revenue from sales. Consequently, its profitability is relatively high, resulting in a correspondingly high level of taxation.

The financial sector carries the next highest income tax burden at 21.3 percent as of 2022, down from its peak of 25.9 percent in 2014. The information and communication and manufacturing sectors face relatively high tax rates of 18.3 percent and 15.9 percent, respectively. These sectors operate under stringent government regulations, with a concentration of enterprises surpassing annual sales revenue of MNT 6 billion or positioned within higher tax brackets.

Conversely, the trade, construction, and transportation sectors, which exhibit high taxable incomes mentioned earlier, bear tax burdens ranging from 10.9 percent to 13.9 percent. This disparity suggests fewer enterprises approaching the 10 percent tax threshold or exceeding the 6 billion MNT sales income threshold.

The table below illustrates the income tax burdens across sectors.



Table 15. Changes in the tax burden, by sector

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	10.0	10.1	10.0	10.1	10.0	10.4	7.6	8.0	10.0
Mining*	24.4	25.0	23.7	24.5	24.5	24.4	23.3	23.5	24.2
Manufacturing*	15.8	18.7	19.8	20.3	21.3	20.4	18.2	17.4	15.9
Electricity supply	10.1	35.6		42.4	18.2	34.1	52.3	16.4	10.1
Water supply	10.3	11.7	13.5	10.1	10.1	10.3		9.2	15.2
Construction*	14.6	12.4	13.7	14.9	15.0	16.0	14.8	12.9	10.9
Trade*	11.5	14.2	12.0	13.7	15.0	14.9	10.7	12.2	12.7
Transport*	15.2	13.9	17.0	16.9	14.1	17.7	10.3	11.0	13.9
Accommodation and food service	11.5	11.0	12.3	25.1	12.9	12.2	10.2	9.7	9.3
Information and communication *	20.5	20.2	19.5	20.7	20.2	20.5	17.7	18.0	18.3
Finance *	25.9	38.0				38.6	19.3	14.5	21.3
Real estate	11.8	12.2	10.9	11.3	10.7	11.1	10.3	10.3	10.2
Science & Technology	15.9	13.5	18.6	11.3	12.6	12.3	11.2	8.9	9.4
Administrative and support service	10.3	10.2	10.5	11.6	10.3	11.3	8.8	7.3	8.6
Public administration	10.0	10.0	10.0	10.0	10.0	10.0	166*	10.1	
Education	10.0	10.0	10.0	11.4	10.1	10.2		22.5	
Health	10.7	10.0	10.0	10.0	10.1	10.5	11.9	23.7	11.2
Arts	10.0	10.0	10.0	10.0	10.0	13.8	10.8	11.6	8.8
Other services	11.0	10.0	10.5	10.0	10.0	10.6			
Other	10.2	11.2	10.8	14.4	12.0	14.0	12.7	9.5	10.7

Source: Mongolian Tax Administration, estimates by researchers

Notes: \* The sectors comprising 90 percent since 2014

The darker red cells in Table 15 represent higher tax burdens, while greener cells indicate lower tax burdens. Yellow cells denote average tax burdens.

From the table above, it is evident that the 7 sectors with the highest taxable income bear either average or higher tax burdens, whereas tax burdens in other sectors are relatively low or declining.

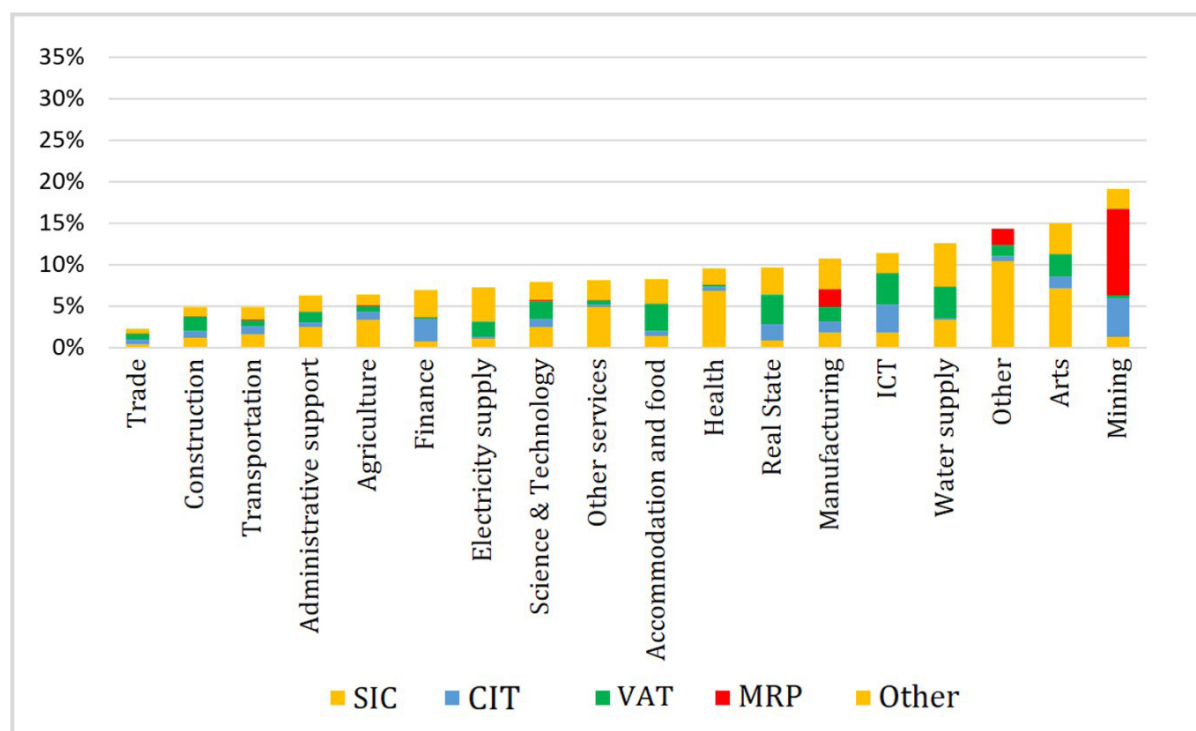
### 2.2.6 Total tax, withholding and contribution to total income ratio of economic sectors

Based on data provided by the MTA and the General Authority of Social Insurance (GASI), it is feasible to calculate the burden of income tax, other taxes, and SIC.

The MTA has submitted sector-specific figures for sales revenue, taxable income, taxed income tax, MRP, and VAT. Meanwhile, the GASI has provided SIC amounts paid by enterprises per sector. These industry classifications correspond to those detailed in Table 12, enabling the aggregation of these figures to determine the overall sector-specific burden combining these taxes and SIC.

The ratio of taxes to the total sales revenue of each sector is illustrated in Figure 22.

Figure 22. Taxes and SIC burdens, as of 2022



Source: Mongolian Tax Administration & General Authority of Social Insurance, estimates by researchers

Analysis of tax and SIC burdens on enterprises by sector reveals varying patterns of tax and contribution payments influenced by sector characteristics. The mining sector, for instance, bore the highest burden in 2022, amounting to 19.1 percent of its income. Within this, 10.4% was attributed to MRP and 4.7% to CIT.

Conversely, sectors such as trade, construction, and transportation faced the lowest burdens, each receiving less than 5 percent of their income. These sectors show a relatively even distribution of burden across CIT, SIC, and VAT.

Sectors with significant labor-intensive operations faced substantial burdens from withholding VAT and PIT. For instance, in 2022, sectors including arts, water supply, health, services, finance, agriculture, and administrative support averaged a burden equivalent to 6.9% of their sales revenue from VAT and PIT. It is important to note that PIT deductions primarily contribute to the 'Other' category shown in the aforementioned analysis.

It is crucial to note that the calculation of tax and SIC burden cannot be directly compared to taxable income. This is due to the differing reporting methods for SIC, which do not align with the indicators used for calculating enterprise sales revenue and other taxable income.

The education and public administration sector, characterized by significant government involvement and funded through the budget, is excluded from direct comparison with the aforementioned sectors.

Table 16 illustrates the comparative ratio of total taxes and SIC to sales revenue over time.

**Table 16. The percentage share of total tax and SIC in sales revenue, by sector**

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	11.3%	9.0%	5.5%	6.9%	6.7%	7.1%	7.5%	6.1%	6.3%
Minnig*	22.5%	19.5%	12.4%	15.8%	16.2%	15.1%	17.1%	21.5%	19.1%
Manufacturing*	23.0%	14.6%	13.7%	11.0%	10.3%	8.9%	10.8%	11.8%	10.7%
Electricity supply	7.6%	7.9%	6.4%	5.3%	4.5%	3.4%	4.3%	4.3%	4.2%
Water supply	16.9%	15.0%	15.4%	15.2%	13.5%	12.7%	13.7%	15.5%	12.6%
Construction*	10.0%	5.7%	4.5%	5.1%	4.3%	4.8%	4.6%	5.8%	4.8%
Trade*	4.4%	2.8%	2.7%	2.4%	2.3%	2.3%	2.5%	2.5%	2.2%
Transportation*	6.8%	5.9%	6.0%	4.9%	5.2%	4.7%	5.3%	5.4%	4.8%
Accommodation and food service	19.9%	12.1%	13.1%	9.5%	9.2%	7.4%	10.0%	7.9%	8.2%
Information and communication*	33.5%	11.6%	10.9%	11.2%	10.8%	9.0%	10.1%	11.2%	11.4%
Finance*	6.7%	6.6%	3.5%	3.8%	5.3%	4.2%	6.3%	8.7%	6.9%
Real estate	14.8%	9.9%	9.5%	9.8%	10.0%	9.3%	9.9%	10.9%	9.6%
Science & Technology	27.7%	11.6%	8.1%	11.5%	11.3%	9.6%	7.4%	9.0%	7.9%
Administrative and support service	13.8%	9.9%	9.5%	7.6%	6.9%	7.1%	10.8%	8.5%	6.2%
Public administration	426.8%	293.7%	615.5%	163.6%	322.6%	297.3%	237.5%	106.3%	109.5%
Education	118.7%	169.6%	192.9%	100.0%	99.5%	92.7%	51.5%	38.6%	30.8%
Health	33.4%	33.2%	29.9%	16.1%	15.9%	15.7%	16.3%	14.2%	9.5%
Arts	80.0%	54.4%	36.5%	15.9%	22.1%	22.5%	18.7%	25.9%	15.0%
Other services	64.0%	71.9%	86.3%	65.8%	34.0%	33.6%	11.8%	10.3%	8.1%
Other	14.5%	12.4%	6.9%	5.5%	7.5%	10.9%	15.4%	5.5%	13.2%

Source: Mongolian Tax Administration, estimates by researchers

Notes: \* The sectors comprising 90 percent since 2014

Based on the above calculations, the overall burden of taxes, withholdings, and contributions in sectors excluding the financial sector has decreased since 2014. For example, the burden on six sectors—mining, manufacturing, construction, trade, transportation, and information and communication—which typically bear the highest taxes, withholdings, and contributions, has generally decreased. Details of the total taxes, withholdings, and contributions paid by these sectors and others are presented in Table 17.

**Table 17. The aggregate of taxes, withholdings, and contributions, by sector, in MNT billions**

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	26	14	12	12	17	19	26	36	47
Mining	785	443	503	1338	1621	1683	1888	3492	3781
Manufacturing	508	326	339	511	590	607	727	811	926
Electrical supply	42	88	98	116	64	67	75	109	65
Water supply	15	7	7	11	12	13	10	15	30
Construction	409	143	119	166	204	310	273	375	388
Trade	445	261	251	373	482	568	625	846	1066
Transportation	65	65	82	96	102	126	116	153	282
Accommodation and food service	64	34	43	57	63	57	59	63	114
Information and communication	282	93	95	114	141	129	169	237	274
Finance	200	247	156	164	307	261	370	632	804
Real estate	69	32	29	37	44	51	49	62	90
Science & Technology	119	44	69	66	102	102	112	126	157
Administrative and support service	64	38	36	43	50	56	61	68	95
Public administration	0	0	0	0	0	0	0	0	0
Education	82	111	140	75	96	90	130	150	193
Health	68	55	56	43	52	62	75	112	136
Arts	6	3	2	1	2	4	6	19	20
Other services	24	20	30	32	23	24	32	39	48
Other	28	15	5	11	18	22	46	1	9

Source: Mongolian Tax Administration

### 2.2.7 Tax burden in mining and agriculture sectors

As mentioned earlier, we have utilized the sector classification approved by the joint order of the Minister of Finance and Chairman of the National Statistical Office dated December 31, 2018.

The agricultural sector is a pivotal component of our country's economy. As of 2022, it contributes 13.1 percent to the GDP. Within this, the livestock sector holds a substantial share of 11.9 percent, while the crop agriculture sector contributes 1.1 percent, with other sectors comprising the remaining 0.1 percent. In 2022, the livestock sector constituted 24.9 percent of the total workforce. Notably, sheep and goats account for the majority of the country's 71.1 million livestock, totaling 84.8 percent. The livestock sector alone forms over 40 percent of the GDP in several provinces, underscoring its critical role in both the local economy and the livelihood of the population.

However, the mining sector stands as the largest sector in our country. As of 2022, it contributed 28.8 percent to GDP. Within the mining and quarrying sector, coal and copper concentrate production dominate. Both coal and copper concentrate production have seen rapid growth in recent years, with projected figures for 2023 reaching historically

high levels of 85.2 million tons and 1.39 million tons, respectively. Despite its capital-intensive nature, the sector employs only about 5% of the total workforce. However, it remains the primary source of export income for our country. In 2022, our total exports amounted to USD 12.5 billion, with USD 11.67 billion attributed to the mining sector, including USD 6.5 billion from coal and USD 2.7 billion from copper concentrate.

The agricultural sector ranks second after the trade and service sector in terms of the number of enterprises registered with the MTA, totaling 10,080 enterprises as of 2022. In contrast, the mining sector has 2,900 registered enterprises, demonstrating a growth rate of 2.5 to 2.8 times over the past 12 years. Approximately 71-74 percent of these enterprises file their tax returns, surpassing the national average of 67.6 percent (see Table 5 and Table 6).

Regarding tax contributions, as of 2022, the mining sector contributed MNT 1.09 trillion in CIT, whereas the agricultural sector contributed only MNT 8.8 billion (see Table 7). This disparity reflects the substantial differences in sales revenue between these sectors. In 2022, the reported sales revenue for the mining sector was MNT 21.27 trillion, compared to MNT 895 billion for the agricultural sector (see Table 8). Consequently, the net taxable income for the mining sector was MNT 5.1 trillion, whereas it was MNT 113 billion for the agricultural sector (see Table 9)

#### *Total tax burden*

In 2023, the mining sector contributed MNT 4.15 trillion to the MRP budget, equivalent to 6 percent of GDP. The tax burden can be calculated by comparing all types of tax payments, including CIT, MRP, and other contributions to MTA, alongside SIC, to the sector's GDP. By

this measure, as of 2022, the mining sector bears a tax burden of 34.4 percent, placing it among the sectors with the highest burdens, whereas the agricultural sector bears the least burden at 1.1 percent (see Error! Reference source not found.).

As previously mentioned, calculating the total tax burden by comparing it with taxable income is more appropriate. However, due to discrepancies in digital data between social insurance payments and data issued by the MTA, aligning these datasets has been challenging. Nonetheless, using consistent sales revenue data across sectors allows for calculation of total tax and social security burdens. By this method, as of 2022, the mining sector faced a tax burden of 19.1 percent, while the agricultural sector's burden was 6.3 percent. The mining sector paid MNT 3.78 billion in taxes, withholdings, and contributions, confirming its status with the highest burden among private sectors, while the agricultural sector paid MNT 47 billion (see Table 16).

Analysis of taxable incomes across sectors as of 2022 reveals significant disparities. The mining sector reported a taxable income of MNT 5.78 trillion, whereas the agricultural sector reported only MNT 175.6 billion (see Table 13). This indicates that the mining sector alone accounts for 37.6 percent of the total economic taxable income, underscoring its pivotal role in the economy and its status as a highly profitable sector.

Further examination of tax burdens, specifically focusing on CIT, shows that in 2022, the mining sector faced a burden of 24.2 percent, the highest among sectors, while the agricultural sector had a burden of only 10 percent, one of the lowest burdens (Figure 21). This calculation compared CIT collections by sector to their respective taxable incomes, with CIT burdens in these sectors remaining stable over the past decade (see Table 15).

## 3 FURTHER CONSIDERATIONS ON MONGOLIAN TAX POLICY

### 3.1 Fundamental principles of taxation

Taxation plays a crucial role in government fiscal policy, serving three primary purposes. Firstly, it generates budget revenue essential for funding government services for citizens. Secondly, it aims to promote social equality through income redistribution. Thirdly, taxation supports businesses and encourages private sector expansion by creating incentives. However, these objectives can sometimes conflict due to the inherent trade-off between efficiency and equality in tax policy. This challenge requires governments to seek a stable equilibrium by carefully balancing the pursuit of one goal against the sacrifice of another.

There are several principles to adhere to when designing a tax system. These principles are based on Adam Smith's canons of taxation and optimal tax theory.

The canons of taxation, first outlined in Adam Smith's "Wealth of Nations," include equity, certainty, convenience, and economy, serving as foundational principles in modern tax system.

Optimal tax theory seeks to maximize social welfare by minimizing economic biases resulting from taxation, thereby enhancing economic efficiency and ensuring a fair distribution of the tax burden. This theory has a century-long history, originating from Ramsey (1927) and further developed by influential contributions such as those of Mirrlees (1976), particularly in the field of labor economics.

Below are eight general principles that are considered important in the modern tax system.

#### 1. Equality

The principle of equality in taxation requires that the total tax burden be distributed among individuals according to their capacity to bear it (Browning and Johnson, 1984). There are two main concepts of equality in taxation:

*Horizontal equity:* This concept suggests that individuals with the same income should pay the same proportion of that income in taxes.

*Vertical equity:* This concept implies that individuals with higher incomes should pay a higher proportion of their income in taxes (Meade, 2013).

The degree of equality of a tax system depends on how much a country aims to reduce income inequality, as well as whether it uses income over a period of time or lifetime income to calculate vertical equity.



In connection with equality, the following concepts appear in the tax system. It includes:

- Progressive tax: A tax in which the tax rate increases as the taxable amount increases. Most countries have such a system of income tax.
- Regressive tax: A tax that applies uniformly regardless of income. This concept implies that low-income individuals will pay a relatively high percentage of their income in taxes, while higher-income individuals will pay a lower percentage. Taxes that decrease as income rises include excise tax, VAT, and other taxes that are not tied to the taxpayer's income level.
- Proportionate tax: A proportional tax system where people with both low and high incomes pay taxes at the same percentage rate of their income. An example of a proportional tax would be an income tax system where everyone is charged the same single percentage rate of their income.
- intergenerational equity: This principle refers to intergenerational equity, which suggests that taxpayers should contribute to public spending in proportion to the benefits they receive from it, regardless of the generation. It advocates that each generation should bear its own tax burden without subsidizing or being subsidized by other generations.

A progressive tax creates a more equal distribution of income.

## 2. Efficiency

The loss of economic efficiency caused by taxation is called social deadweight loss or excess tax burden. This efficiency loss refers to the distortions in economic activity and individual behavior caused by the additional costs imposed on taxpayers and society to generate tax revenue (Auerbach and Hines 2002). Designing an optimal tax system means minimizing this tax distortion (Browning and Johnson 1984). The negative effect of progressive taxation on efficiency is greater, as higher tax rates diminish incentives for individuals to maintain higher incomes and generate wealth. This reduction in incentives can lead to decreased overall social efficiency.

There is reason to believe that the prevalence of proportionality in our country (where a 10 percent proportional tax was applied under the framework of the "four 10 policy" before the 2019 tax reform) had a positive effect on economic expansion. However, with the latest tax reform, the incremental nature of taxes has increased compared to before. For instance, under the CIT, a higher tax rate of 25% is applied if the annual taxable income exceeds MNT 6 billion, while under PIT, a rate of 20% is applied to monthly income above MNT 10 million, and 30% for income exceeding MNT 15 million. These changes create conditions where the negative impact on economic activity is relatively limited.

## 3. Convenience

The principle of convenience is rooted in Smith's principles of convenience of payment and collection. Convenience demands that the tax system be straightforward and comprehensible.



It is achieved when the following two costs are minimized (Meade 2013):

- Administrative costs
- Compliance costs

Tax rules must be clear and easily understandable. The tax system must garner public acceptance, and authorities must be accountable to the taxpayers. When taxpayers do not understand the system, it undermines both acceptance and accountability. Therefore, the tax system should be designed to ensure that citizens, households, and businesses are aware of their responsibilities and rights.

Lack of simplicity in the tax system increases compliance costs. Introducing complex rules can potentially lead to widespread tax evasion. An administratively feasible tax system allows for effective implementation and enforcement without undue complexity or cost. Administrative efficiency is crucial in reducing tax evasion.

In the 2020 PwC and World Bank Paying taxes report<sup>5</sup>, Mongolia ranked 71st in terms of ease of paying taxes. The rankings were determined based on the costs associated with taxing businesses and the time required for compliance across 191 economies.

Since the electronic tax system provides conditions for ease of payment and low cost of collection, it is necessary to continue the measures initiated in this area. In particular, it is necessary to implement measures related to customs duties.

In addition, there is still a need to reduce the costs, delays, and time spent related to tax payment rather than tax rate.

#### **4. Certainty**

Tax legislation should be stable, predictable, transparent, and provide clarity for individuals and enterprises to plan their financial activities. The clarity of tax liability is crucial for maintaining economic stability.

#### **5. Flexibility**

The tax system must be responsive to changing economic conditions, cyclical fluctuations, and social needs. Flexibility allows for adjustments to be made without compromising the overall stability of the system.

Flexibility should also be considered in managing fiscal volatility. For instance, it is necessary to have the flexibility to increase taxes in one area to compensate for deficiencies in another tax.

#### **6. Public acceptance**

The tax system must be acceptable to the public and perceived by taxpayers as fair and reasonable. Public support enhances voluntary compliance and reduces the likelihood of tax evasion.

<sup>5</sup> <https://www.pwc.com/gx/en/services/tax/publications/paying-taxes-2020/overall-ranking-and-data-tables.html>

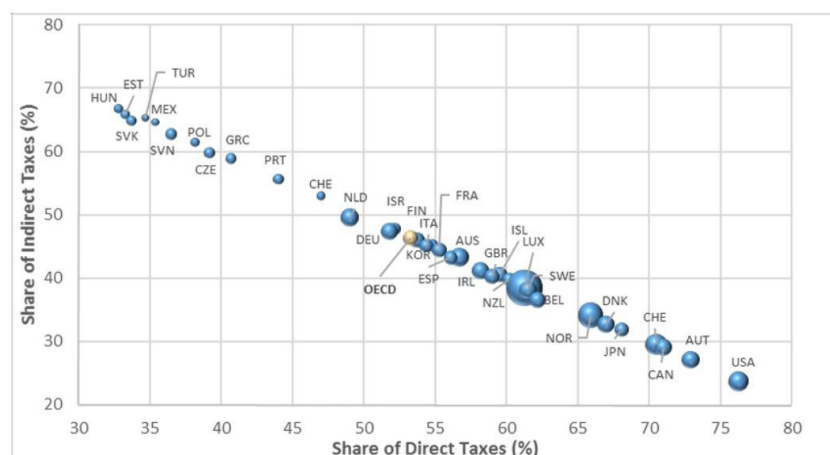
The underlying principles outlined here provide a general framework for policymakers to strike a balance between equity, efficiency, and practical implementation. While these principles guide the design of tax systems, specific policy options may be implemented differently based on economic, cultural, and political contexts.

It can be concluded that Mongolia's tax system is relatively simple, characterized by few tax brackets and a predominant adherence to the principle of proportionality. As a result, the negative impact on economic expansion and efficiency is relatively minimal. However, this simplicity limits the positive impact on income redistribution and hampers citizens' ability to manage income disparities effectively. Particularly, the capacity to levy higher taxes on high-income earners remains weak. Recent reforms aimed at making taxes more incremental represent a positive step forward, but further improvements are needed in this approach. Incremental taxation enhances flexibility in responding to economic conditions and should be further developed to optimize effectiveness.

### 3.2 Direct and indirect taxes

Direct and indirect taxes differ between countries. Direct tax is the tax on income and property. This includes PIT and CIT, SIC, and property taxes. Indirect tax is the tax on consumption. These include VAT, excise tax, customs duties and trade taxes. Considering the tax structure of the countries, there are countries where direct taxes dominate and indirect taxes are relatively low, such as the US and Japan, and on the other hand, countries with higher indirect taxes such as Germany, France, Chile, and Türkiye. The characteristics of direct taxes are related to the income and assets of individuals and enterprises, so they have a better effect on the redistribution of income. However, in countries where indirect taxes predominate, the burden of these taxes tends to weigh more heavily on low-income citizens.

**Figure 23. Percentage of direct and indirect taxes in tax revenues for 34 OECD countries as of 2011(excluding SIC)**

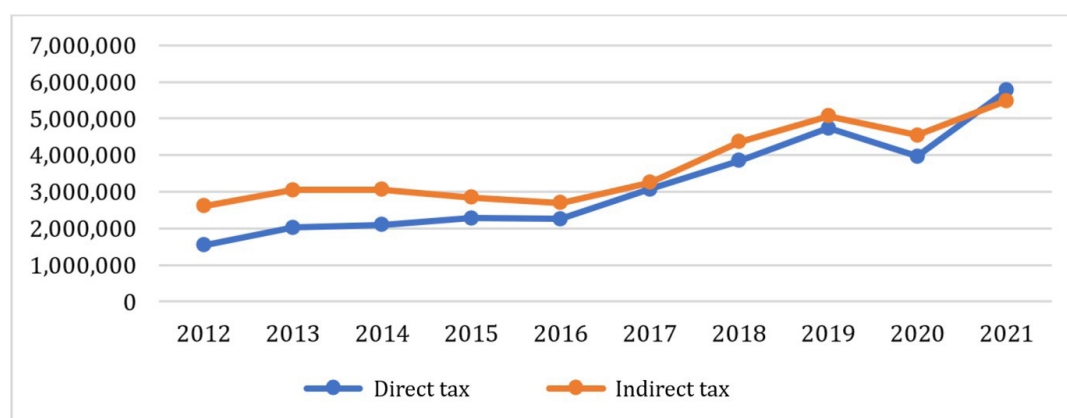


Source: Produced by the authors based on OECD Tax Revenue Statistics

According to Martinez-Vazquez et al. (2011)<sup>6</sup>, from 1972 to 2005, the share of direct taxes increased while the impact of indirect taxes decreased across 116 countries worldwide. This trend was especially pronounced in developed countries. The main reason for this trend is the increasing significance of SIC in developed countries. Conversely, developing countries have seen a decline in the share of customs duties, partially offset by an increase in consumption taxes. Decreasing the ratio of direct to indirect taxes can positively impact economic growth, notably by stimulating foreign direct investment (FDI) and improving economic competitiveness. However, it may also negatively affect macroeconomic stability and income redistribution.

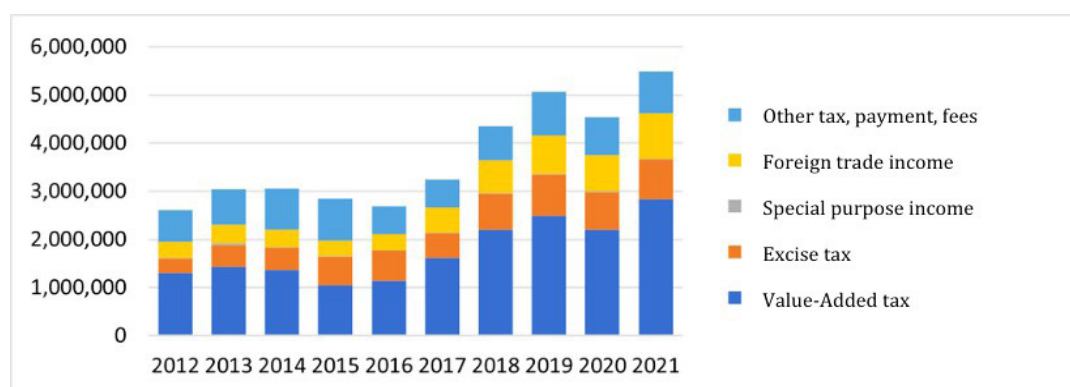
In Mongolia, direct and indirect tax payments have been at the same level in recent years (see Figure 24, Figure 25, Figure 26). For instance, since 2014, indirect taxes such as VAT, excise duty, and customs duty have played a significant role, increasing the financial burden on low-income citizens (see Figure 26).

**Figure 24. Amount of direct and indirect taxes, in MNT millions**



Source: National Statistical Office

**Figure 25. Direct taxes structure, in MNT millions**

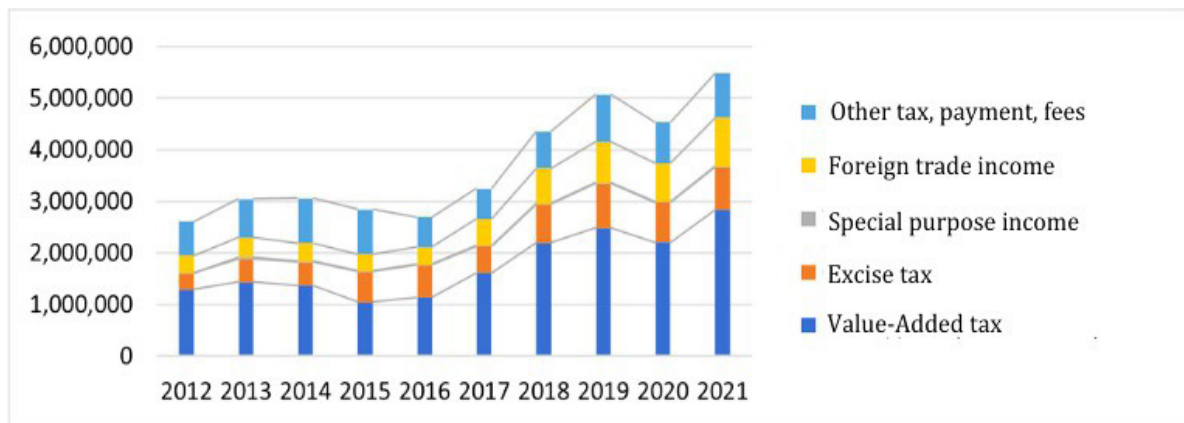


Source: National Statistical Office

<sup>6</sup> [https://scholarworks.gsu.edu/cgi/viewcontent.cgi?article=1045&context=econ\\_facpub](https://scholarworks.gsu.edu/cgi/viewcontent.cgi?article=1045&context=econ_facpub)

It is important to note the criticisms related to VAT taxation. For instance, VAT has been criticized for not aligning with the concept of 'value added' and essentially resembling the sales tax used in other countries. Unlike a sales tax, which is applied only at the point of final sale to consumers, VAT is levied on intermediate products throughout the production chain, not solely on the final product. This discrepancy highlights a persistent issue requiring attention and correction.

**Figure 26. Indirect taxes structure, million MNT**



*Source: National Statistical Office*

Starting from January 1, 2023, PIT has been structured into three tiers, marking a policy change aimed at enhancing equality. Looking forward, there is a necessity to further increase the share of direct taxes, particularly property taxes, to promote more equitable income redistribution.

Concurrently, stabilizing CIT can support long-term economic growth and attract FDI.

In conclusion, our country is one of the countries with relatively high indirect taxes. The main type of this tax is VAT. In recent years, direct taxes have also risen, driven by increases in CIT and SIC. Indirect taxes, not linked to properties and income, impose a heavier burden on low-income households and small enterprises. Future reforms should prioritize increasing the proportion of direct taxes, which can positively impact income distribution equity. Regarding VAT, it is crucial to adhere to its fundamental principles, avoid double taxation, and ensure timely refunds.

### 3.3 Tax morale

Public acceptance of the tax system, as discussed earlier, is closely linked to tax morale.

**Tax morale** refers to the willingness of individuals and companies to voluntarily fulfill their tax obligations (Torgler 2007). Tax morale reflects the level of trust, cooperation, and ethical standards in the relationship between taxpayers and tax administrations.

The key components and factors influencing tax morale (Torgler (2007)), are summarized and outlined below:

*Perceived fairness.* Taxpayers are more likely to voluntarily comply if they perceive the tax system to be fair. This perception is shaped by the equal distribution of the tax burden, as well as the transparency and fairness of tax rules.

*Trust in the government.* A high level of trust in government institutions leads to positive tax morale. Citizens are more likely to voluntarily comply with the system if they are confident that the taxes they pay will be spent responsibly and transparently on public goods and services.

*Social norms and values.* Tax ethics are influenced by social norms and values related to civic duty and responsible citizenship. Individuals may be more inclined to pay taxes when societal expectations emphasize contributing to the common good.

*Quality of public services.* The quality and availability of tax-funded public services significantly affect tax morale. People tend to view taxes positively if they see that the taxes they pay contribute to improvements in infrastructure, education, health, and other essential services.

*Perceptions of tax evasions.* The prevalence of tax evasion in society negatively impacts tax morale. If individuals perceive that tax evasion is widespread and unpunished, their willingness to comply with tax obligations diminishes.

*Communication and education.* Effective communication and education about the importance of taxes and how they contribute to the welfare of society can positively impact tax morale. Understanding the purpose of taxation and the consequences of non-compliance creates a sense of responsibility.

*Enforcement and deterrence.* While tax ethics focus on voluntary compliance, effective enforcement mechanisms and methods play a significant role. Strict enforcement of regulatory rules can reduce tax evasion and enhance the perception of fairness in the tax system.

*Economic conditions.* Economic conditions, such as income levels and employment opportunities, significantly affect tax morale. Individuals are more willing to comply with tax obligations when they experience economic stability and prosperity.

Understanding tax morale is important for tax administrations and policy makers to develop

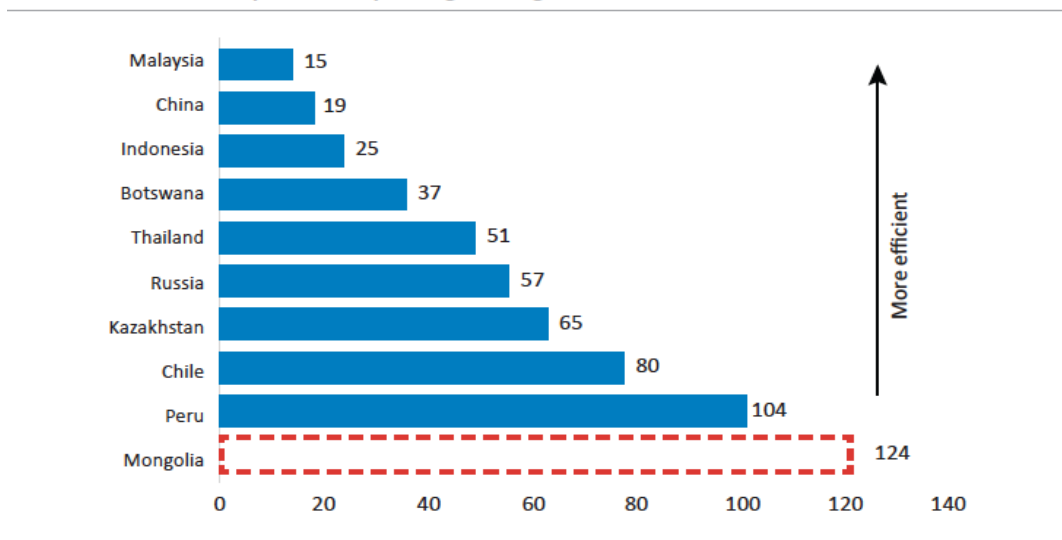
tax policies that aim to achieve tax revenue targets while fostering a positive and cooperative relationship between taxpayers and the government.

For our country, it can be seen that there is a defect in the above indicators.

The World Economic Forum's Global Competitiveness Index 2018 report highlights Mongolia's poor government spending efficiency. According to the report, Mongolia was ranked 124th out of 140 countries in 2017(see Figure 27)

**Figure 27. Mongolia's government spending efficiency, world ranking**

**FIGURE (ES).2 Efficiency of Public Spending Ranking**



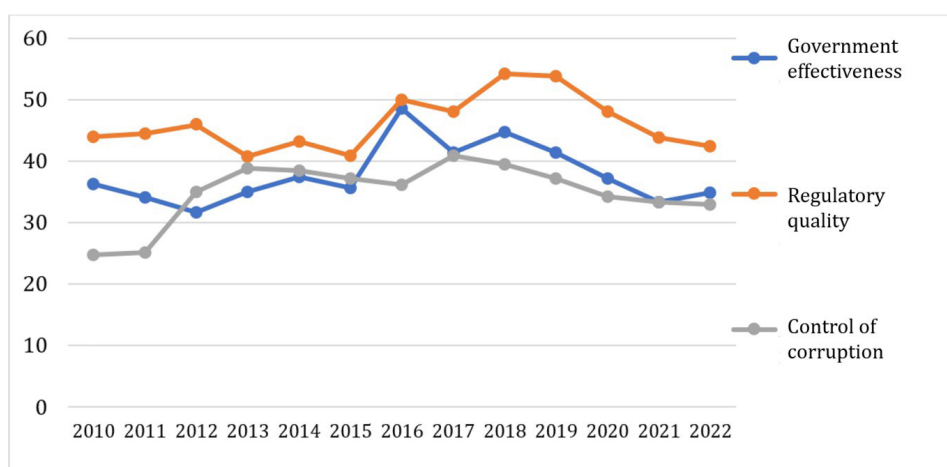
*Source: Global Competitiveness Index 2016-17, World Economic Forum*

Since 1996, the World Bank has computed "Governance Indexes" encompassing over 200 countries, with each country assessed and ranked based on six governance indices. Rankings are presented as percentile scores, where 100 percent signifies the highest performance and 0 percent indicates the lowest.

The Government Effectiveness Index stands out as a critical indicator measuring a government's ability to achieve its objectives with taxpayer funds. This index evaluates factors such as the quality of the civil service, freedom from political influence, and infrastructure quality.

In 2016, Mongolia scored 48.6 percent on this index, but this figure has since declined to 33.0 percent by 2022.

Figure 28. World Bank Governance Indices, Mongolia's percentile rank, 2010–2022



Source: Daniel Kaufmann and Aart Kraay (2023). *Worldwide Governance Indicators, 2023 Update* ([www.govindicators.org](http://www.govindicators.org))<sup>7</sup>

Furthermore, the Regulatory Quality index describes the business environment. It is composite index that measures the extent of price controls, unfair competition conditions, investment and financial freedom, tariffs and trade restriction, and government regulatory pressure. According to this indicator, Mongolia has been decreasing since 2018 from 54.3 percent to 42.5 percent in 2022.

The Control of Corruption index has been continuously decreasing since 2017, from 40.1 percent to 33 percent in 2022. This index measures the prevalence of corruption in public service, the misappropriation of public funds, and whether public servants require bribes or favors to provide essential public services such as household education and health.

In conclusion, the government of Mongolia has been insufficiently fulfilling its obligations. Indicators that had shown improvement since 2010 have consistently degraded over the last 6-8 years. This has a negative effect on the willingness of taxpayers and enterprises to continue paying taxes. In the future, the basis for any tax reform must be connected with the improvement of tax morale. To achieve this goal, it is crucial to enhance government spending efficiency and transparency, ensure transparent government procurement practices in accordance with the law, improve the quality of all government services, develop infrastructure, and enhance the independence of the civil service. These measures will increase trust in the government. It is essential to demonstrate to citizens and businesses that government spending is efficient and directed towards beneficial purposes. Based on these efforts, transitioning gradually to a system dominated by direct taxes, which is more incremental in nature, is advisable.

<sup>7</sup> <https://www.worldbank.org/en/publication/worldwide-governance-indicators>



### 3.4 Tax reporting system

In our country, the majority of tax revenue is generated by legal entities or enterprises. It is legal obligation for citizens to declare their income and pay their taxes. However, under the current tax system, penalty for individuals who fail to declare their income and pay taxes are still relatively weak. On the other hand, the absence of tax refunds or incentives for filing tax returns has contributed to this situation. This situation has created a system where citizens may be less inclined to declare their taxes and may not fully embrace their obligations and responsibilities to pay taxes. That is why the tax administration focuses more on the payment, collection, control, and inspection of corporate taxes, placing greater pressure on enterprises than on individuals. Therefore, starting a business by establishing an enterprise is more challenging than earning income by doing a sole proprietorship.

The tax administration currently focuses its attention primarily on enterprises. This focus results in numerous regulatory procedures, instructions, fines, penalties and controls that disproportionately affect enterprises, leading to significant administrative burdens and pressure on them.

Tax equality can be achieved by broadening the taxpayer base to include more individuals who file their own taxes. Implementing a comprehensive individual income and tax reporting system would mitigate the burden of tax inequality faced by enterprises. This approach would also facilitate comprehensive tax administration registration and promote the inclusion of all citizens in tax reporting. Moreover, positive outcomes would include an increase in total tax revenue, reduction of the informal sector, and expansion of the tax base.

#### **Box: Individual income and tax reporting system**

What kind of system would it be?: Every adult citizen is required to fill out their tax return annually and submit it to the tax administration in their district, province, or sum, either electronically or on paper. Filing a tax return allows citizens to potentially reclaim a portion of the taxes paid on their personal income throughout the year. Regarding tax refunds, the statement should include various inputs related to income generation, such as deductible expenses, investments, and applicable discounts and exemptions under specific conditions. Additionally, the tax administration should provide comprehensive procedures, instructions, and manuals for individual income tax reporting, along with professional assistance in this regard.

What are the benefits?: The introduction of this system aims to expand the taxpayer base, thereby increasing tax revenues across various categories and reducing the size of the informal sector. This initiative will enable citizens to have better oversight of their tax reporting. Additionally, it will facilitate more accurate determination of individual



incomes, which can significantly reduce corruption and related crimes. As a result, interactions between citizens and tax administration are expected to improve, enhancing the overall relationship between society and citizens to a new level.

Who will use it?: The system will be utilized not only by tax administration and government entities but also by banks, financial institutions, leasing companies, credit providers, investment firms, and insurance companies for making decisions based on individual income. It can serve as a document and evidence in legal and court proceedings related to financial matters and assets between citizens, as well as between citizens and legal entities.

Why do people need to file tax return?: Individuals reporting their income and taxes have the following advantages. It includes:

- A portion of the tax paid can be refunded. Since the implementation of VAT, citizens have become accustomed to tax refunds, fostering a practice and mindset of reclaiming a portion of taxes. Additionally, an electronic structure, database, and system covering the entire country will be established. This system will need to specify the types of taxes eligible to for refunds and the reasons for issuing these refunds.
- When an individual takes a loan from a bank, financial institution, or credit provider, they do not need to show the amount of SIC. Since SIC is primarily calculated from wages and salaries, it does not reflect the total income of an individual, making it challenging for some to determine their income. With this system, non-working income of a full-time worker is reported, providing a true representation of that person's total income, thus increasing their opportunity to obtain a loan.

When a citizen submits his tax return to the tax administration on time, he will have the opportunity to receive financial assistance, endowments, and discounts from the state.

### 3.5 Linking the tax reporting system to employment and welfare

Coordinating individual tax reporting with government welfare policies is essential. According to a World Bank report, our country ranks higher in key welfare indicators, including total welfare expenditure, welfare per capita, and the number of welfare recipients compared to both the region and similar developed countries (World Bank 2018b).

The coordination of welfare policies through individual income, tax reporting, and tax refund system is exemplified by the Earned Income Tax Credit (EITC) implemented in the US since 1975. Eligibility for EITC benefits depends on income level, type of tax reporting (individual or family), and the number of eligible children. This system allows low and middle income individuals or households to benefit by claiming the tax credit through a tax refund. Each

year, the income thresholds and credit amounts vary, which in turn affect the refund amount based on factors such as filing status and number of eligible dependents. The advantages of this system include:

- It incentivizes employment among low-income earners by providing financial rewards through tax refunds.
- The attraction of tax credits effectively doubles the incentive for accurate tax reporting.
- As the taxpayer's income increases, refundable tax credit gradually phases out until it reaches a certain threshold, after which it decreases to zero.
- Employment, tax payment, tax reporting, and welfare function as a regulatory tools because tax credits are transferred to individuals as welfare through tax refunds.

In the context of Mongolia, tailored tax incentives can be introduced to support the minimum subsistence level of population, without directly replicating existing regulations.

Note: The scenarios presented in Table 18. are illustrative calculations designed to demonstrate the recommended regulatory principles. They serve as examples to clarify how the proposed regulations can be applied in practice.

As a reference, the following calculations are presented.

Eligibility criteria for tax credits: The eligibility criteria for receiving tax credits are based on the percentage of the tax relief amount relative to the taxpayer's total annual income. Tax relief is granted if the amount of tax relief is 50% or more of the taxpayer's taxable income. In Variant 1 of Table 18, an individual with a total annual income of MNT 24 million MNT receives tax relief amounting to MNT 21.8 million, which is 91% of their total income. According to the criteria described, this individual qualifies for tax credits because the relief amount exceeds 50% of their taxable income. In contrast, the taxpayer in Variant 4 does not qualify for the tax credits as the credits amount constitutes only 45% of their total income. This method determines tax credits eligibility based on the proportion of income allocated to qualifying expenditures, rather than solely on total income. This approach aims to eliminate discrimination by not setting a threshold based solely on total income.

Calculate the amount of tax credits: The calculation of tax credits is based on the current "minimum subsistence level of population". Dependents such as children under the age of 18 (50 percent), spouses, and elderly individuals (100 percent) under the care of the taxpayer contribute to this calculation. If the dependent spouse or elderly person earns any income, it is included in the taxpayer's total income for tax purposes. In Variant 3, the taxpayer is an individual responsible for 2 children and 1 adult. The total credits amount is calculated as MNT 16.3 million, which represents 90% of the taxpayer's total annual income, meeting the eligibility criteria for tax credits.

If the applicant's income is less than the amount of tax credits, the person will receive a refund of the total tax paid (Variant 2).

Criteria for granting tax refund: The person must (1) meet the eligibility criteria (2) file his tax return in timely manner, either individually or as a household, and (3) if they have earned income, ensure that their personal income tax is fully paid by the legal deadline.

**Table 18. Standard calculation of tax refund**

Indicators	Variant 1	Variant 2	Variant 3	Variant 4
Individual's annual income	24,000,000	15,600,000	18,000,000	36,000,000
Taxes paid	2,400,000	1,560,000	1,800,000	3,600,000
Tax filers	2	2	1	1
Number of children (50% of MSLP)	2	2	2	2
Number of adults under care (100% of MSLP)	1	1	1	1
Tax credits	21,801,600	21,801,600	16,351,200	16,351,200
Taxes after tax credits	219,840	-	164,880	-
Tax refund	2,180,160	1,560,000	1,635,120	-
Minimum subsistence level of population	454,200			

Advantages of implementing the above regulation:

- Tax compliance will be enhanced, as individuals seeking tax credits must have consistently met their tax payment obligations in full and on time. This will also contribute to an increase in taxpayer enrollment and improved registration.
- The existing PIT rates do not need to be restructured or adjusted specifically to accommodate tax credits for low-income individuals before tax payment. This approach upholds the principle that all citizens are subject to taxes at the same rates.
- Timely submission of tax returns qualifies individuals for tax credits. This requirement promotes a stronger commitment among citizens to fulfill their tax reporting obligations promptly and accurately, fostering a positive culture and attitude towards tax compliance and encouraging responsible taxpayer behavior.
- Tax credits issued as refunds for taxes paid can be viewed as a form of welfare support. However, increasing welfare benefits through tax credits does not inherently correlate negatively with employment rate.

Incorporating the minimum subsistence level of population indicator into tax credit calculation aligns welfare policies effectively with tax policies. This alignment ensures that welfare, taxes, income, and employment factors intersect within the tax system, promoting enhanced policy coordination across these areas.

## 4 CONCLUSION

Mongolia's tax system has undergone continuous reforms. The 2007 reform aimed to simplify the multi-tiered system and introduce proportional taxation for key taxes. Reforms in 2015 and 2019 focused on expanding the tax base, reducing the informal sector, making taxes more progressive, and incorporating low-income earners. Positive regulations accompanied these reforms, including improvements in tax collection, debt settlement, registration and inspection processes, taxpayer rights protection, risk reduction, dispute resolution, and digitalization.

However, criticisms remain. These include a VAT system deviating from international standards, a weak impact on income redistribution, and a high tax burden on low-income earners and small and medium-sized businesses.

Mongolia's tax revenue share of GDP is 30% in 2023. While lower than developed countries, it's high compared to nations with similar income levels. This indicator has steadily increased in recent years. Four taxes – CIT, VAT, SIC, and mineral royalty payments – contribute 76% of total tax revenue.

As of 2022, the CIT burden varies – 2% for small enterprises, 11% for medium enterprises, and 23% for large enterprises. Notably, large enterprises account for 79.7% of total CIT collected. This reflects both the progressive nature of the tax and the over-concentration of businesses in this category. Mining, trade, finance, and manufacturing sectors are the primary contributors to CIT, likely due to strong government regulation and the limited number of large players in these sectors.

A sector-by-sector comparison of total tax and SIC burden reveals the mining sector bears the highest load (19.1% of sales revenue in 2022). Over half is from mineral royalty payments, with CIT accounting for a quarter. Conversely, trade, construction, and transportation sectors have the lowest burden (less than 5% of sales revenue).

Labor-intensive small and medium businesses are heavily burdened by PIT withholding tax and SIC. Sectors like education, arts, water supply, healthcare, services, finance, agriculture, and administrative support face the highest combined burden of PIT withholding and SIC (averaging 6.9% of sales revenue). This burden has decreased since 2014 in sectors like mining, manufacturing, construction, trade, transportation, and information communication.

The rising share of VAT in state tax revenue requires attention. As an indirect tax, VAT disproportionately burdens low-income earners and small businesses due to its detachment from income or wealth. Reforms are needed to increase the share of direct taxes and ensure a more equitable income distribution. However, further policy research are crucial. This includes exploring VAT implementation based on its core principles, avoiding double taxation, differential goods taxation, and income-linked VAT refunds.

Tax reforms, particularly those raising tax rates or increasing progressivity, must consider citizen and business willingness to pay taxes and overall tax ethics. Optimal budget spending and high-quality, accessible public services contribute to a higher willingness to pay taxes. Therefore, prioritizing efficient state budget spending and gaining public trust is paramount.

The individual tax reporting system can be further improved by mandating filing for all citizens. This would enable determination of citizen income, verification of proper tax payments, access to real information for loans and other financial services, and receipt of tax credits and refunds. Mandatory filing would allow for better coordination between the tax system and employment and welfare policies.

Social protection measures can be delivered as tax-paid refunds through tax credits. This approach, unlike direct welfare, incentivizes employment rather than reducing it. Since only employers and taxpayers benefit from tax credit deductions, it provides a genuine means of supporting employment through tax policy. Additionally, incorporating tax credits into the minimum subsistence level calculation fosters alignment between tax and welfare policies. Ultimately, a tax return system that integrates social protection, taxes, income, and employment data would enhance policy coordination across these areas.

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## APPENDIX

### Appendix 1. Business entities that sent tax reports, by sector

Table X1: Number of large entities that have submitted tax reports, by sector

Year	2019	2020	2021	2022
Agriculture	1	1	1	6
Mining	62	86	131	201
Manufacturing	45	59	61	75
Electricity supply	16	16	16	19
Construction	28	31	31	48
Trade	96	171	191	333
Transportation	18	30	44	64
Accommodation and food service	13	7	7	9
Information and communication	17	15	14	15
Finance	29	30	29	35
Real estate	19	12	12	15
Science & Technology	17	18	21	30
Administrative and support service	11	25	11	19
Health	3	3	3	4
Arts		1	1	1
Other services	1	3	0	1
Other		7	0	
<b>Total</b>	<b>376</b>	<b>515</b>	<b>573</b>	<b>875</b>

Table X2: Number of medium entities that have submitted tax reports, by sector

Year	2019	2020	2021	2022
Agriculture	32	7	5	20
Mining	202	66	52	129
Manufacturing	276	146	128	221
Electricity supply	35	22	6	28
Construction	22	11	8	15
Trade	430	167	153	390
Transportation	883	470	486	987
Accommodation and food service	142	124	269	339
Information and communication	65	43	41	49
Finance	38	25	24	60
Real estate	69	62	64	88
Science & Technology	78	22	18	54
Administrative and support service	91	56	51	105
Health	72	36	33	54
Arts	3	19	3	3
Other services	9	22	17	17
Other	25	28	19	30
Agriculture	5	4	3	4
Mining	9	15	13	19
Manufacturing	1	1	1	1
<b>Total</b>	<b>2487</b>	<b>1346</b>	<b>1394</b>	<b>2613</b>

Table X3: Number of small entities that have submitted tax reports, by sector

Year	2019	2020	2021	2022
Agriculture	674	730	839	935
Mining	317	399	438	277
Manufacturing	1480	1931	2091	2203
Electricity supply	144	184	210	189
Construction	79	92	93	90
Trade	2876	3490	3937	3675
Transportation	7907	11850	13497	14740
Accommodation and food service	594	956	999	1028
Information and communication	696	1021	1052	1022
Finance	435	653	726	775
Real estate	537	706	761	741
Science & Technology	481	563	575	551
Administrative and support service	976	1303	1426	1551
Health	861	1124	1181	1172
Arts	5	121	47	24
Other services	288	686	622	571
Other	677	942	925	915
Agriculture	45	110	111	119
Mining	323	515	803	1106
Manufacturing	7	14	12	14
<b>Total</b>	<b>19402</b>	<b>27390</b>	<b>30345</b>	<b>31698</b>

*Table X4: Number of micro entities that have submitted tax reports, by sector*

Year	2019	2020	2021	2022
Agriculture	5183	5754	6117	6372
Mining	1531	1566	1575	1550
Manufacturing	6944	7408	7796	8048
Electricity supply	119	92	88	81
Construction	133	148	168	194
Trade	6728	7097	7357	7581
Transportation	42499	41291	42724	42732
Accommodation and food service	2405	2502	3173	3500
Information and communication	2834	2778	2983	3205
Finance	2273	2739	3094	3235
Real estate	2780	2652	2623	2523
Science & Technology	1121	1109	1066	1048
Administrative and support service	6020	6596	6932	7273
Health	5213	5796	6702	7157
Arts	3	50	47	75
Other services	1352	2437	2508	2609
Other	1767	1659	1659	1671
Agriculture	392	833	886	915
Mining	1656	10988	12538	13062
Manufacturing	1756	1701	1002	1394

**Appendix 2. Number of entities that have reported taxes, by sub-sector and classification**  
**Table X5: Number of taxpayers who sent returns, by sub-sector**

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	2067	3970	4189	4387	4833	5234	5775	6219	6525
Silviculture	296	516	534	551	592	644	704	732	797
Fishing	1	7	9	8	9	12	13	11	11
Coal	59	134	139	146	146	149	138	142	141
Petroleum	2	7	8	9	8	7	6	8	8
Mining of iron ores	147	291	289	303	330	334	309	327	317
Other mineral	101	223	234	239	283	310	307	311	302
Support activities for petroleum and natural gas	366	802	863	1039	1300	1312	1357	1408	1389
Food products	929	1773	1888	2044	2287	2583	2885	3131	3342
Beverages	76	171	172	178	192	206	221	225	230
Tobacco products	2	4	4	3	4	4	4	4	4
Textiles	242	489	505	511	559	610	640	633	644
Wearing apparel	410	803	831	858	941	1032	1154	1206	1255
Leather and related products	111	211	230	236	275	308	353	386	432
Wood and wood products	383	740	765	770	837	907	961	975	991
Paper and paper products	34	64	65	64	70	82	90	100	100
Printing	222	410	425	436	491	550	614	629	651
Coke and refined petroleum products	16	29	29	31	35	36	37	42	41
Chemicals and chemical products	39	71	73	77	91	102	117	128	134
Pharmaceutical products	17	39	45	44	45	53	49	46	49
Rubber and plastics products	88	173	169	175	184	194	194	204	205
Non-metallic mineral products	370	703	713	714	759	787	814	835	854
Manufacture of basic metals	50	98	112	102	130	147	166	174	185
Metal products	97	200	206	218	238	256	273	303	325

Manufacture of electronic	7	14	13	14	15	12	16	15	14
Electrical equipment	22	41	38	41	44	45	49	49	51
Other equipment	15	32	33	34	38	39	41	40	35
Manufacture of motor vehicles, trailers	7	8	11	8	10	14	14	15	13
Manufacture of other transport equipment	2	4	3	3	3	5	5	5	5
Furniture	128	243	264	274	311	351	409	463	515
Other manufacturing	49	90	96	97	115	121	133	134	135
Repair and installation of machinery and equipment	134	238	259	271	293	301	305	334	337
Electricity	119	248	264	286	298	314	314	320	317
Water supply	37	71	75	73	78	81	76	77	77
Sewerage	4	9	10	11	12	12	13	14	14
Waste collection	44	86	89	95	107	118	136	152	180
Remediation activities	7	15	20	22	23	23	26	26	28
Construction	1396	2707	2762	2816	3019	3031	3025	3014	2953
Civil engineering	201	418	435	438	469	489	486	495	496
Specialized construction activity	3079	5397	5459	5389	5868	6542	7274	7969	8245
Trade and repair of motor vehicles	926	1679	1754	1854	2111	2384	2745	3113	3308
Wholesale trade	13430	24314	25789	27235	30488	32647	33356	34531	35311
Retail trade	6570	12441	13157	13773	14762	16354	17681	19254	20173
Auto transport	815	1494	1621	1840	2153	2535	2962	3785	4238
Water transport									
Air transport	32	42	35	32	33	36	35	35	35
Warehousing and support activity for transportation	204	396	416	470	519	543	560	581	561
Postal and courier activity	19	35	38	40	49	45	55	84	97
Hotel	303	582	582	604	640	692	724	800	832
Restaurant	1150	2086	2252	2369	2631	2916	3125	3283	3453
Publishing activity	231	433	445	469	521	565	839	913	990
Motion picture, video	94	197	237	255	306	354	437	498	522

Radio television	93	165	166	160	170	176	187	178	173
Telecommunications	119	208	216	213	215	224	221	212	210
Programming	419	744	774	834	1011	1221	1446	1672	1779
Information	64	136	157	173	208	223	302	385	411
Finance and Bank	1248	2291	2530	2684	2827	3036	3045	3021	2916
Insurance	14	34	35	33	35	38	34	35	36
Other financial service	126	242	266	290	320	341	371	421	435
Real estate	608	1295	1345	1386	1529	1699	1706	1671	1668
Legal and accounting	304	575	627	644	744	847	1028	1107	1231
Management consultancy	360	685	732	857	1091	1293	1544	1765	2072
Architecture	488	888	942	1024	1119	1317	1447	1594	1634
Scientific research	92	232	279	318	371	411	553	620	628
Marketing	212	386	410	425	482	519	605	647	692
Other scientific activity	746	1214	1256	1245	1333	1402	1506	1531	1557
Veterinary	599	1077	1153	1189	1222	1315	1290	1166	1145
Rental activity	203	399	416	434	484	552	597	687	761
Employment activity	25	49	58	69	95	111	140	161	192
Travel	963	1897	2117	2346	2812	3187	3420	3743	3860
Security	183	346	358	360	389	423	425	449	444
Landscape activity	95	185	218	226	266	279	347	398	429
Business support	861	1368	1405	1345	1428	1605	2052	2489	2716
Public administration	4	7	8	7	9	11	190	97	102
Education	612	1151	1234	1276	1482	1649	3145	3147	3197
Health	990	1847	1939	2051	2196	2318	2356	2306	2310
Care activity	43	96	101	107	118	135	183	199	203
Care activity without accommodation	8	12	15	15	16	19	93	101	107
Arts and entertainment	39	85	99	107	122	179	298	298	307
Cultural activity	8	19	22	26	30	28	70	70	71
Sports activity	62	152	159	168	189	235	580	633	661
Club	12	120	139	139	277	896	10307	12040	12777
Repair of goods	157	309	315	321	338	362	380	411	435
Other personal service	264	490	514	555	657	731	834	903	976
Other	1876	2893	2488	2351	2134	1764	1723	1015	1409
<b>Total</b>	<b>47047</b>	<b>86845</b>	<b>91147</b>	<b>95334</b>	<b>105274</b>	<b>114974</b>	<b>134447</b>	<b>143350</b>	<b>149411</b>

*Table X6: Number of large taxpayers to whom returns have been sent, by sub-sector*

Year	2019	2020	2021	2022
Agriculture	1	1	1	6
Coal	13	24	25	42
Petroleum	2	2	2	2
Mining of iron ores	21	25	49	63
Other mineral	3	9	16	29
Support activities for petroleum and natural gas	23	26	39	65
Food product	7	17	17	20
Beverages	11	9	9	10
Tobacco products	2	2	2	2
Textiles	1	7	7	8
Wearing apparel	3	4	4	4
Paper and paper products				1
Printing	3	2	2	2
Coke and refined petroleum products	2	1	2	4
Chemicals and chemical products	5	3	3	5
Pharmaceutical products				2
Rubber and plastics products	1	1	1	1
Non-metallic mineral products	3	6	6	8
Manufacture of metals	6	5	6	5
Metal products	1			1
Manufacture of furniture		1	1	1
Other manufacturing		1	1	1
Electricity	16	16	16	19
Construction	19	21	21	26
Civil engineering	1	1	1	6
Specialized construction activity	8	9	9	16
Trade and repair of motor vehicles	9	17	17	23
Wholesale trade	53	93	112	212
Retail trade	34	61	62	98



Auto transport	7	14	27	44
Air transport	3	4	4	4
Warehousing and support activity for transportation	7	11	12	15
Postal and courier activity	1	1	1	1
Hotel	9	2	2	2
Restaurant	4	5	5	7
Publishing activity		1	0	
Radio television	5	3	3	3
Telecommunication	9	9	9	9
Programming	2	1	1	2
Information	1	1	1	1
Bank and finance	19	19	19	22
Insurance	3	5	4	4
Other financial service	7	6	6	9
Real estate	19	12	12	15
Legal and accounting	2	1	1	1
Management consultancy	11	12	12	15
Architecture	3	3	6	9
Scientific research	1		1	2
Other scientific activity	0	2	1	3
Rental activity	6	2	2	6
Employment activity	1	1	1	1
Travel	1	1	1	2
Business support	3	21	7	10
Health	1	2	3	4
Care activity	2			
Care activity without accommodation		1	0	
Sports activity		1	1	1
Club		3	0	
Other personal service	1			1
Other		7	0	

*Table X7: Number of medium taxpayers who sent reports, by sub-sector*

Year	2019	2020	2021	2022
Agriculture	31	7	5	18
Silviculture	1			2
Coal	19	6	3	16
Petroleum	1			
Mining of iron ores	111	22	17	39
Other mineral	14	3	2	14
Support activities for petroleum and natural gas	57	35	30	60
Food product	78	46	40	69
Beverages	23	7	6	14
Textiles	19	9	5	10
Wearing apparel	20	10	9	17
Leather and related products	8	3	2	5
Wood and wood products	3			3
Paper and paper products	11	9	9	8
Printing	8	3	3	6
Coke and refined petroleum products		2	3	3
Chemicals and chemical products	7	8	8	9
Pharmaceutical products	7	6	5	5
Rubber and plastics products	10	3	3	6
Non-metallic mineral products	48	23	21	36
Manufacture of metals	11	4	2	7
Metal products	8	6	5	6
Manufacture of electronic	1			
Electrical equipment	2	1	1	1
Other equipment	2			1
Manufacture of motor vehicles, trailers	1			
Other transport equipment		1	1	
Furniture	3	1	1	5
Other manufacturing	1	1	1	1
Repair and installation of machinery and equipment	5	3	3	9
Electricity	35	22	6	28
Water supply	10	6	3	9
Waste collection	12	5	5	6
Construction	243	96	89	223
Civil engineering	73	25	19	52
Specialized construction activity	114	46	45	115
Trade and repair of motor vehicles	47	31	38	68
Wholesale trade	617	303	330	658

Retail trade	219	136	118	261
Auto transport	93	93	227	278
Warehousing and support activity for transportation	45	31	42	58
Postal and courier activity	1			3
Hotel	20	14	13	15
Restaurant	45	29	28	34
Publishing activity	3	1	1	2
Motion picture, video	4	4	4	7
Radio television	10	8	7	12
Telecommunication	10	1	1	6
Programming	11	10	10	28
Information		1	1	5
Bank and finance	37	31	33	50
Insurance	7	6	6	7
Other financial service	25	25	25	31
Real estate	78	22	18	54
Legal and accounting	10	9	9	14
Management consultancy	32	14	15	30
Architecture	31	19	16	34
Scientific research	3	6	3	8
Marketing	2	3	3	3
Other scientific activity	11	4	5	15
Veterinary	2	1	0	1
Rental activity	9	6	5	14
Employment activity	2	1	1	1
Travel	25	15	15	15
Security	10	4	4	5
Landscape activity	4	2	2	2
Business support	22	8	6	17
Public administration	3	19	3	3
Education	9	22	17	17
Health	19	27	19	28
Care activity	6	1		2
Arts and entertainment	1	1	0	1
Cultural activity	0	0	0	
Sports activity	4	3	3	3
Club	3	9	7	12
Other personal service	6	6	6	7
Other	1	1	1	1
<b>Total</b>	<b>2484</b>	<b>1346</b>	<b>1394</b>	<b>2613</b>

**Table X8: Number of Small TaxPayers Submitting Reports, by Sub Sector**

Year	2019	2020	2021	2022
Agriculture	595	655	754	836
Silviculture	77	75	85	99
Coal	35	40	45	14
Petroleum	2	1	1	1
Mining of iron ores	43	84	93	61
Other mineral	74	77	78	58
Support activities for petroleum and natural gas	163	197	221	143
Food products	352	514	574	648
Beverages	50	55	61	57
Tobacco products	1	1	1	1
Textiles	81	110	115	126
Wearing apparel	132	193	200	225
Leather and related products	51	69	77	80
Wood and wood products	93	114	117	153
Paper and paper products	14	16	21	17
Printing	125	166	180	199
Coke and refined petroleum products	6	6	6	3
Chemicals and chemical products	24	26	27	26
Pharmaceutical products	8	14	16	14
Rubber and plastics products	69	68	70	69
Non-metallic mineral products	228	248	256	213
Manufacture of metals	20	37	36	32
Metal products	70	78	81	85
Manufacture of electronic	1	3	4	3
Other equipment	3	10	9	9
Manufacture of motor vehicles, trailers	0	1	1	1
Other transport equipment	3	2	2	3
Furniture	46	74	94	109
Other manufacturing	25	20	27	24
Repair and installation of machinery and equipment	72	101	108	98
Electricity	144	184	210	189
Water supply	43	42	45	39
Sewerage		3	2	2
Waste collection	33	43	43	44
Remediation activities	3	4	3	5
Construction	1228	1371	1456	1170
Civil engineering	170	244	270	225
Specialized construction activity	1478	1875	2211	2280
Trade and repair of motor vehicles	411	596	703	773
Wholesale trade	4743	6589	7402	7426
Retail trade	2753	4665	5392	6541

Auto transport	441	754	792	850
Air transport	8	9	11	8
Warehousing and support activity for transportation	132	181	179	153
Postal and courier activity	13	12	17	17
Hotel	187	238	250	218
Restaurant	509	783	802	804
Publishing activity	111	119	127	145
Motion picture, video	35	70	76	85
Radio television	53	63	64	42
Telecommunication	56	71	73	62
Programming	148	284	331	378
Information	32	46	55	63
Bank and finance	483	631	670	651
Insurance	9	9	8	8
Other financial services	45	66	83	82
Real estate	481	563	575	551
Legal and accounting	152	198	226	261
Management consultancy	147	234	272	334
Architecture	337	379	415	424
Scientific research	48	90	86	94
Marketing	83	120	135	138
Other scientific service	189	195	233	240
Veterinary	20	87	59	60
Rental activity	145	181	215	216
Employment activity	8	15	15	22
Travel	268	368	350	269
Security	155	176	180	186
Landscape activity	50	78	87	107
Business support	235	306	334	372
Public administration	5	121	47	24
Education	288	686	622	571
Health	638	882	858	856
Care activity	35	57	60	49
Care activity without accommodation	4	3	7	10
Arts and entertainment	12	40	35	45
Cultural activity	2	17	14	9
Sports activity	31	53	62	65
Club	224	355	624	907
Repair of goods	45	69	79	92
Other personal service	54	91	100	107
Other	7	14	12	14
<b>Total</b>	<b>19400</b>	<b>27390</b>	<b>30345</b>	<b>31698</b>

*Table X9: Number of micro-tax payers who sent reports, by sub-sector*

Year	2019	2020	2021	2022
Agriculture	4607	5112	5459	5665
Silviculture	566	629	647	696
Fishing	10	13	11	11
Coal	82	68	69	69
Petroleum	2	3	5	5
Mining of iron ores	159	178	168	154
Other mineral	219	218	215	201
Support activities for petroleum and natural gas	1069	1099	1118	1121
Food products	2146	2308	2500	2605
Beverages	122	150	149	149
Tobacco products	1	1	1	1
Textiles	509	514	506	500
Wearing apparel	877	947	993	1009
Leather and related products	249	281	307	347
Wood and wood products	811	847	858	835
Paper and paper products	57	65	70	74
Printing	414	443	444	444
Coke and refined petroleum products	28	28	31	31
Chemicals and chemical products	66	80	90	94
Pharmaceutical products	38	29	25	28
Rubber and plastics products	114	122	130	129
Non-metallic mineral products	508	537	552	597
Manufacture of metals	110	120	130	141
Metal products	177	189	217	233
Manufacture of electronic	10	13	11	11
Electrical equipment	37	43	40	42
Other equipment	34	31	31	25
Manufacture of motor vehicles, trailers	13	13	14	12
Manufacture of other transport equipment	2	2	2	2
Furniture	302	333	367	400
Repair and installation of machinery and equipment	224	201	223	230
Electricity	119	92	88	81
Water supply	28	28	29	29
Sewerage	12	10	12	12
Waste collection	73	88	104	130
Remediation activity	20	22	23	23
Construction	1541	1537	1448	1534
Civil engineering	245	216	205	213
Specialized construction activity	4942	5344	5704	5834
Trade and repair of motor vehicle	1917	2101	2355	2444
Wholesale trade	27234	26371	26687	27015

Retail trade	13348	12819	13682	13273
Auto transport	1994	2101	2739	3066
Air transport	22	22	20	23
Warehousing and support activity for transportation	359	337	348	335
Postal and courier activity	30	42	66	76
Hotel	476	470	535	597
Restaurant	2358	2308	2448	2608
Publishing activity	451	718	785	843
Motion picture, video	315	363	418	430
Radio television	108	113	104	116
Telecommunication	149	140	129	133
Programming	1060	1151	1330	1371
Information	190	254	328	342
Bank and finance	2497	2364	2299	2193
Insurance	19	14	17	17
Other financial service	264	274	307	313
Real estate	1121	1109	1066	1048
Legal and accounting	683	820	871	955
Management consultancy	1103	1284	1466	1693
Architecture	946	1046	1157	1167
Scientific research	359	457	530	524
Marketing	434	482	509	551
Other scientific activity	1202	1305	1292	1299
Veterinary	1293	1202	1107	1084
Rental activity	392	408	465	525
Employment activity	100	123	144	168
Travel	2893	3036	3377	3574
Security	258	245	265	253
Landscape activity	225	267	309	320
Business support	1345	1717	2142	2317
Public administration	3	50	47	75
Education	1352	2437	2508	2609
Health	1660	1445	1426	1422
Care activity	92	125	139	152
Care activity without accommodation	15	89	94	97
Arts and entertainment	166	257	263	261
Cultural activity	26	53	56	62
Sports activity	200	523	567	592
Club	669	9940	11409	11858
Repair of goods	317	311	332	343
Other personal service	670	737	797	861
Other	1756	1701	1002	1394
<b>Total</b>	<b>92709</b>	<b>105196</b>	<b>111038</b>	<b>114225</b>

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