THE IMPACT OF TAXES ON PRICES AND PRODUCTION IN JORDAN

Mustafa M. Soumadi[A], Ashraf Mohammad Salem Alrjoub[B]

ARTICLE INFO	ABSTRACT
	Purpose: This study aims to demonstrate the impact of taxes on prices and production in Jordan. **Theoretical framework:** Study problem lies in asking the following questions 1. Does the tax system in Jordan serve the economic aspects? 2. Does the tax in Jordan affect the economic aspect? 3. Is the tax in Jordan fair? 4. Is there an impact of the tax on prices in Jordan? 5. Is there an impact of the tax on production in Jordan? 6. What is the effect of taxes on consumer speeding on necessary versus luxury goods? 7. What is the impact of higher taxes on personal income of consumers? 8. The effect of Lower taxes on the economy and disposable income? 9. What is the alternative for governments to increase their income other than direct higher tax system? 10. What is the effect of various government entities; such as financial, administrative, and social corruption on Jordan economy? **Design/methodology/approach:** Researchers used standard analysis method and vector error correction model for the period (2011-2020), and used the profit margin ratio indicator as a representative indicator for production and prices. **Findings:** Results showed a long-term causal relationship between prices and production; from one side and direct and indirect taxes; from the other side and that relationship between short-term deviations and long-term reliability is corrected at a rate of (3%) per year. Results showed a negative significant impact of indirect taxes on price competitiveness; in the long term which was reinforced by the variance components' analysis and response function's test. Results also showed an insignificant impact of direct and indirect taxes on price competitiveness; in the short term. **Research, Practical & Social implications:** Demonstrating the impact of taxes on prices and production in Jordan. As well as, discussing the governmental tax and income. **Originality/value:** The importance of study stems from research topic, since taxes have multiple effects on various areas in society which can be divided into scientific and practical importance. Doi: https://doi.org/10.26668/businessreview/2023.v8i5.1680

[A] *Assistant Professor. Al-Balqa Applied University. Irbid, Jordan. E-mail: mlsmadi2@yahoo.com*
Orcid: https://orcid.org/0009-0001-1380-5217
[B] *Associate Professor. Al-Balqa Applied University. Irbid, Jordan. E-mail: Ashraf-alrjoub@bau.edu.jo*
Orcid: https://orcid.org/0000-0001-8005-1219

Intern. Journal of Profess. Bus. Review. |Miami, v. 8 | n. 5| p. 01-19 | e01680 | 2023.

1

O IMPACTO DOS IMPOSTOS SOBRE OS PREÇOS E A PRODUÇÃO NA JORDÂNIA

RESUMO
Objetivo: Este estudo tem como objetivo demonstrar o impacto dos impostos sobre os preços e a produção na Jordânia.
Referencial teórico: O problema de estudo consiste em fazer as seguintes perguntas
1. O sistema tributário da Jordânia atende aos aspectos econômicos?
2. O imposto na Jordânia afeta o aspecto econômico?
3. O imposto na Jordânia é justo?
4. Existe impacto do imposto sobre os preços na Jordânia?
5. Existe impacto do imposto sobre a produção na Jordânia?
6. Qual é o efeito dos impostos sobre a velocidade do consumidor em bens necessários versus bens de luxo?
7. Qual é o impacto de impostos mais altos sobre a renda pessoal dos consumidores?
8. O efeito de impostos mais baixos na economia e no rendimento disponível?
9. Qual é a alternativa para os governos aumentarem sua renda além do sistema de impostos diretos mais altos?
10. Qual é o efeito de várias entidades governamentais; como a corrupção financeira, administrativa e social na economia da Jordânia?
Desenho/metodologia/abordagem: Os pesquisadores usaram método de análise padrão e modelo vetorial de correção de erros para o período (2011-2020) e usaram o indicador de margem de lucro como um indicador representativo para produção e preços.
Resultados: Os resultados mostraram uma relação causal de longo prazo entre preços e produção; de um lado e impostos diretos e indiretos; do outro lado e essa relação entre desvios de curto prazo e confiabilidade de longo prazo é corrigida a uma taxa de (3%) ao ano. Os resultados mostraram um impacto negativo significativo dos impostos indiretos na competitividade de preços; a longo prazo o que foi reforçado pela análise de componentes de variância e teste de função de resposta. Os resultados também mostraram um impacto insignificante dos impostos diretos e indiretos na competitividade de preços; A curto prazo.
Pesquisa, implicações práticas e sociais: demonstrando o impacto dos impostos sobre os preços e a produção na Jordânia. Bem como, discutindo o imposto e renda do governo.
Originalidade/valor: A importância do estudo decorre do tema da pesquisa, uma vez que os impostos têm múltiplos efeitos em diversas áreas da sociedade que podem ser divididas em importância científica e prática.

Palavras-chave: Impostos, Impostos Diretos, Impostos Indiretos, Produção, Preços, Jordânia.

EL IMPACTO DE LOS IMPUESTOS EN LOS PRECIOS Y LA PRODUCCIÓN EN JORDANIA

RESUMEN
Objetivo: Este estudio pretende demostrar el impacto de los impuestos sobre los precios y la producción en Jordania.
Marco teórico: El problema de estudio consiste en formular las siguientes preguntas
1. ¿El sistema tributario de Jordania aborda aspectos económicos?
2. ¿El impuesto en Jordania afecta el aspecto económico?
3. ¿Es justo el impuesto en Jordania?
4. ¿Hay un impacto del impuesto sobre los precios en Jordania?
5. ¿Hay un impacto del impuesto sobre la producción en Jordania?
6. ¿Cuál es el efecto de los impuestos de velocidad al consumidor sobre las necesidades frente a los bienes de lujo?
7. ¿Cuál es el impacto de impuestos más altos en el ingreso personal de los consumidores?
8. ¿El efecto de los impuestos más bajos sobre la economía y el ingreso disponible?
9. ¿Cuál es la alternativa para que los gobiernos aumenten sus ingresos más allá del sistema de impuestos directos más altos?
10. ¿Cuál es el efecto de varias entidades gubernamentales; como la corrupción financiera, administrativa y social en la economía jordana?
Diseño/metodología/enfoque: Los investigadores utilizaron un método de análisis estándar y un modelo de corrección de errores de vector para el período (2011-2020) y utilizaron el indicador de margen de beneficio como indicador indirecto de producción y precios.
Resultados: Los resultados mostraron una relación causal de largo plazo entre precios y producción; por un lado, los impuestos directos e indirectos; por otro lado y esta relación entre las desviaciones a corto plazo y la fiabilidad a largo plazo se corrige a razón del (3%) anual. Los resultados mostraron un impacto negativo significativo de los impuestos indirectos sobre la competitividad de los precios; en el largo plazo, lo que se vio reforzado por el análisis

de componentes de varianza y la prueba de función de respuesta. Los resultados también mostraron un impacto insignificante de los impuestos directos e indirectos sobre la competitividad de los precios; A corto plazo.
Investigación, implicaciones prácticas y sociales: demostración del impacto de los impuestos sobre los precios y la producción en Jordania. Así como, discutiendo los impuestos y la renta del gobierno.
Originalidad/valor: La importancia del estudio radica en el tema de investigación, ya que los impuestos tienen múltiples efectos en diferentes ámbitos de la sociedad que se pueden dividir en importancia científica y práctica.

Palabras clave: Impuestos, Impuestos Directos, Impuestos Indirectos, Producción, Precios, Jordania.

INTRODUCTION

In general, taxes play an important role on the economies of all countries as a fiscal tool and policy to influence production, consumption, and saving and also to reach financial reliability. Taxes have negative and positive economic effects, and I will talk here about the impact of frequent and exaggerated tax increases on individual consumption, which consequently affects producers of goods or services, local and external distributors, and the general price level (Al-Tamimi, 2020).The frequent and exaggerated increase in taxes affects the cost of production and distribution, and thus pushes business owners to take financial measures within these institutions and companies as much as possible to mitigate the impact of taxes on the prices of their products and services in order to maintain the ability of those goods and products to compete, and to achieve this business owners resort to burdens new taxes on internal costs of production (Le, et. al, 2020).Rationalization of energy consumption and production costs. But in Jordan, due to the continuous economic pressures, most institutions and companies have carried out rationalization operations for a long time, and the scope for improvement and rationalization has become very limited by reducing the number of employees and this will affect unemployment rate, and also reducing costs by dropping the quality level of products and services, which is a practical solution but it would weaken the competitiveness of products and services, reduce salaries of employees, workers, and contractors (Le, et. al, 2020). This is a practical solution, but it has negative effects on the level of the general income of individuals and the level of life quality. Tax evasion expected strongly because the above solutions are all difficult and most business owners will resort to avoid them as much as possible, by creating a suitable environment for the growth of a corrupt class within the tax entity to profit from this situation. If all the above solutions fail, business owners may be forced to terminate their projects and exit the market, leaving behind a significant impact on the level of unemployment, production, services and the health of the economy in general (Nawasrah, 2019).Tax is a method of raising revenues for the day to day running of government activities, which involve generating funds and using similar methods to provide security, social amenities,

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01680 | 2023.

3

and infrastructural facilities for country inhabitant. Therefore, it is worthy to note that taxation objective aligned with government functions (AKHOR, 2016). To be clear, higher taxes cause a reduction in the tendency to consume and rise in the inclination to save, which negatively affects countries' economic security. There are two types of taxes; one is direct and the other is indirect, where direct taxes targeted peoples with high incomes; therefore consumption is not significantly affected by it while indirect taxes focused on individuals with low incomes who have greater influence on consumption because potentials for this class to consume is huge.Usually, taxes may be imposed on individuals' wages or assets, and legal taxpayers may bear its impact directly or by moving its burden to others; where in either case taxes will have economic effects on individuals' consumption and their savings. Producers are often affected by consumers and this not only effect producers, but also spreads to distributors and the overall level of prices (Nawasrah, 2019).The World Bank is an international organization dedicated to providing financing, advice, and research to developing nations to aid their economic advancement. The bank predominantly acts as an organization that attempts to fight poverty by offering developmental assistance to middle- and low-income countries (The Word Bank, 2019). According to the World Bank, during the period 1981 to 2000, which encompassed both Reagan and Clinton, the tax revenue as a percentage of U.S. GDP hit a low of 9.9% and a high of 12.9% (The World Bank, 2000).Although taxes are not related to the provision of a direct service in return for its payment, tax revenues are used to finance public utilities necessary for the community, and thus, from this point of view, payers can expect services in return for their tax assignment in the form of public infrastructure or a state of law in all its meanings or in the form of a system Socially capable of giving, and in addition to this financing task, there is a guiding task for these tax revenues, as in the case of the environment tax, or the task of redistribution, as is the case in the scope of the progressive income tax (Nazmi & Mofleh, 2015).If the goal from imposing taxes is to attain public interest, then its economic and social effects are numerous, but the opposite can happen because taxes may cause social disappointment by driving individuals to commit social crimes and prevalent riots. Taxes may be counterproductive on the economic level whenever they are very high, which cause foreign investments to move into other countries that have less severe tax rates. Accordingly, study problem lies in asking the following questions:

1. Does the tax system in Jordan serve the economic aspects?

2. Does the tax in Jordan affect the economic aspect?

3. Is the tax in Jordan fair?

4.   Is there an impact of the tax on prices in Jordan?

5.   Is there an impact of the tax on production in Jordan?

6.   What is the effect of taxes on consumer speeding on necessary versus luxury goods?

7.   What is the impact of higher taxes on personal income of consumers?

8.   The effect of Lower taxes on the economy and disposable income?

9.   What is the alternative for governments to increase their income other than direct higher tax system?

10.   What is the effect of various government entities; such as financial, administrative, and social corruption on Jordan economy?

Based on study problem and questions, this study seeks to achieve the following objectives:

1.   Explanation of the impact of the tax system in Jordan on the economic aspects.

2.   An indication of whether the tax in Jordan is fair or not.

3.   Explanation of the effect of tax on prices in Jordan.

4.   Statement of the effect of tax on production in Jordan.

5.   Explanation of the impact of taxes on consumer's speed with respect to essential goods versus luxury goods.

6.   Statement of the effect of higher taxes on personal income of consumers.

7.   Statement of the effect of lower taxes on the economy and disposable income.

The importance of study stems from research topic, since taxes have multiple effects on various areas in society which can be divided into:

First: Scientific Importance

It's summarized in the addition it provides to Arab and international libraries in general, and to the Jordanian Libraries in particular; with this type of research.

Second: Practical Importance

It's summarized in the provision of solutions and suggestions to regulation of taxes and their equitable distribution in proportion to production without affecting prices in Jordan.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01680 | 2023.

5

LITERATURE REVIEW

Agha (2005) studied impact of taxes on GDP in Sudan during (1981-2003) by identifying its effect on achieving the sustainable development, using some time series analysis methods to test study hypotheses. Study results indicate that tax system in Sudan did not positively affect GDP, the existence of many tax problems, and an increase in tax evasion rates. The study recommended implementation of tax system that agrees with development goals of Sudanese's government. Al-Nawasrah (2019) study aimed to measure the impact of tax revenues on GDP growth in Jordan for period (1992-2017) using the multiple linear regression models to test study hypotheses. Results indicated a significant statistical effect of sales and customs tax on GDP growth, and recommended to improve tax services and focus on indirect taxes; such as customs' taxes on imported goods that have similar local products.

The study of (Ali, 2018) examined the effect of tax revenue and economic growth of Kenya (1980 to 2007). In order to achieve this objective, relevant time-series secondary data were collected from the Central Bank of Kenya (CBN) Statistical Statement, Federal Inland Revenue Service (FIRS), and previous works done by scholars. The collected data analyzed using ordinary least square method. Study results display that tax revenue has a positive significant effect on economic growth. Nguyen (2019) conducted a study that aims to identify the role of government spending on achieving economic growth during (2010-2019). The study found an impact of government expenditures and tax revenues percentage on Jordanian economy during study period, while it recommended examining other economic variables that mostly affect the Jordanian economy (Al-Tamimi, 2020; Bissaran & Shin, 1998).

METHODOLOGY

Study Procedures

To achieve study objectives, the development of tax revenues and domestic product during (2011-2020) will be studied. The normal relationships between independent variable (tax revenue value) and dependent variable (gross domestic product value) will also be studied during this period.

Time series data have been employed to determine the impact of direct and indirect taxes on price competitiveness in Jordan, represented by profit margin ratio in the manufacturing sector in short and long term using standard methodology. If all variables are stable at the level or at different degrees, (Vector Autoregressive) methodology will be used but if all variables are unstable at the level and at first or second difference, (Vector Error

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01680 | 2023.

6

Correction Model) will be used instead. It is worth noting that a vector model Error Correction (VECM) is an autoregressive vector (VAR) but is restricted and is used with counteraction time series.

Many studies have used the profit margin ratio as a representative variable for price competitiveness (Lakshmi K, 2003; Boulhol, 2009, Al-Tarawneh, 2001), where this indicator is based on the consideration that cost plays a role in determining the levels of profits, where an increase in cost will lead to a reduction in profit margin. In practice, establishments use the method of adding to cost in determining prices of their products (Cost-Plus Pricing), due to the difficulty of determining marginal revenue and marginal cost, as required by economic theory. The method of adding to cost is based on determining total average cost (TAC) for a certain normal rate of production and then adding a specific profit margin to it, which can be represented by the following equation:

P = ATC (1+M)

Where p: price, ATC total average cost, M profit margin ratio
The above equation can be rearranged to become:

M = (P-ATC) / ATC

And due to the difficulty of obtaining the data of the previous equation, we will multiply it by Q/Q to become:

M = (TR - TC) / TC

where
TR: Total Revenue
TC: Total costs

It is clear from the third equation that change in profit margin percentage depends on the change in price and quantity, in addition to fixed costs and variable costs. As the low of this percentage means that reducing prices with the intention of competition without a corresponding reduction in cost may lead to low levels of profits or achieve losses, and this means less competitive ability, forcing the institution to exit the market. As for the increase in this ratio, it may mean an increase in competitiveness, as its increase results from lower levels of cost or an increase in profits (TR - TC), and the increase in net revenue may be due to an increase in the amount of sales or an increase in prices, both of which mean better

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01680 | 2023.

7

competitiveness. An increase in sales may means better quality while higher prices mean that they can be reduced and thus better price competition.

Data Collection

The data used in study related to direct taxes and indirect taxes were obtained from publications of Jordan Central Bank, Ministry of Finance, and Department of Statistics reports, while the profit margin ratio was calculated by researcher based on third factor. The evolution of tax revenues and GDP values in Jordan (2011-2020) as follow:

Table (1) showed that tax revenues value in Jordan for the period (2011-2020) ranged between a minimum of (1.140) billion dinars in 2000 and a maximum of (4.536) billion dinars in 2018, where the annual average amounted to (2.857) billion dinars; during study period with an increase of (9.2%). Table (1) also showed that evolution of GDP value in Jordan during (2011-2020) ranged between a minimum of (6.083) billion dinars in 2011 and a maximum of (29.894) billion dinars in 2020, where the annual average amounted to (17,151) billion dinars; during study period with an increase of (23.1%).

Table (1) tax revenues and GDP values in Jordan during (2011-2020)

Year	Tax revenue value (Billion JD)	GDP value (Billion JD)
2011	1.140	6.083
2012	2.621	10.825
2013	2.986	19.025
2014	3.351	22.273
2015	3.652	24.186
2016	4.037	25.794
2017	4.096	27.011
2018	4.254	27.830
2019	4.343	28.903
2020	4.536	29.984

Source: Jordanian Ministry of Finance during (2011-2020), Central Bank of Jordan during (2011-2020), https://data.albankaldawli.org/country/jordan

Theoretical Study

The Jordanian government proposed a new income tax bill on May 2018; in accordance with the demands of International Monetary Fund to raise taxes and reduce tax exemptions, but public protests against it. The majority of low-income workers will not be affected by new law, where previously only the top (4.5%) of wage earners paid taxes but after enforcing the law it reached (10%) of salaries (Al-Tamimi, 2020). Many people expressed their dissatisfaction with the general situation in Kingdom, where Jordanian economy in terrible state with low wages, high prices, high unemployment of (18.6%), and a public debt of over (94% of GDP. People

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01680 | 2023.

8

claimed that government was ineffective and corrupt; therefore it's partially responsible for the country's economic situation by increasing its wealth through imposing new income tax law on hardworking and struggling citizens (AL-Tamimi & Bataineh, 2021).

The nonstop protests in mid-2018; with a broad base of population's support, forced the king to respond to it by delaying introduction of new tax law, replacing unpopular prime minister, and restructuring the government. These measures have succeeded in pleasing publics to some extent but the dissatisfaction expressed in social media has by no means decreased (AL-Tamimi & Bataineh, 2021). After a series of cosmetic changes to the law, which designed to show that government took protesters' concerns seriously, Parliament passed the law in November 2018 and finally came into force on January 1, 2019. There are debates on weather income tax law will easing Jordan's economic problems (Nguyen, 2019).

All countries aim to increase their financial resources to fulfill the monetary and public burdens and expenditures they incur to achieve the essential economic and social development. They also use all means to increase revenues, where taxes consider the most important methods for revenues in Jordan and many worlds' countries; especially developing one (Narayan, 2005). Taxes used as one of the most important financial policy tools for state to influence the existing economic, social, and commercial activities. Jordan is concerned with tax laws and legislation, and used a set of financial policies and reforms to improve public revenues and reduce tax evasion rates; as part of the Jordanian economy (Nguyen, 2019).Taxes are one of the financial policy tools that have a pivotal role in achieving economic stability and achieving a high rate of economic growth, in light of price stability. For example, the accounting framework of Jordan is also discussed comprehensively and the strategies that are followed for mandatory disclosure of businesses in Jordan (Shakatreh et al, 2022).

Tax deduction raises repercussions on macroeconomic variables; such as consumption, savings, production, and investment, therefore the degree and nature of impact and reflection vary according to tax policy nature (Nawasrah, 2019).In spite of progress made to reduce poverty, the recession began in Jordanian economy; ends of 2008 put its financial accounts under pressure due to tax revenue and external grants (Nawasrah, 2019). This downturn required efforts to justify government expenditure and implement reforms, where popular views of Jordan's movement to reduce scarcity thru this period stayed gloomy, which made reform efforts very difficult (Shawky, 2017). Furthermore, the regional wave of civil uprisings in 2011 known as the Arab Spring placed stronger demands on government regarding populist policies.

Tax systems are primarily aimed to finance public expenditures and used to promote other objectives, such as equity, as well as addressing social and economic concerns. They need to minimize taxpayers' compliance costs and government's administrative cost while discouraging tax avoidance and evasion (Asa, 2008). In this approach, the multinational corporation positively and significantly affects tax avoidance (OktavianiM & Wulandari, 2023).

Tax revenues represent a large part of Jordan's GDP; during 2020 with about (15.9), where the two largest components of it are direct taxes such as payroll and goods and services; as shown in table (2). Study analysis focuses on these two tax items, which directly affect societies and made up about (34%) of government revenues. In addition, the state collects corporate taxes from private companies, indirect taxes from commercial sectors, and customs duties on imported goods.

Table (2) government revenues in Jordan

Revenue source	Total (millions JD)	Share of GDP (%)	Share of total (%)
Total government revenue, a	4,642.1	24.7	22.3
Tax revenues, b	2,986.0	15.9	34.7
Taxes on income and profits	624.6	3.3	24.4
Personal income tax	152.3	0.8	100.0
Corporate taxes from private firm	472.3	2.5	0.0
GST and other indirect taxes	1,997.8	10.6	43.2
Sales tax on imported goods	819.4	4.4	0.0
Sales tax on domestic goods	463.3	2.5	100.0
Sales tax on services	400.4	2.1	100.0
Sales tax on commercial sector	304.2	1.6	0.0
Tax on air fares	10.5	0.1	0.0
Other taxes, c	363.6	1.9	5.7
Of which: **Pension contributions**	20.7	0.1	100.0
Foreign grants	401.7	2.1	0.0
Other revenues, d	1,254.4	6.7	0.0

Source: Jordanian Ministry of Finance during (2011-2020), Central Bank of Jordan during (2011-2020), https://data.albankaldawli.org/country/jordan
Note: the table does not include customs duties on imports because household survey data do not specify whether expenditures were on imported goods or services.

GDP = Gross Domestic Product; GST = general sales tax; Dinar = Jordanian dinar

a. Total Government Revenue = Tax Revenue + Other Revenue + Foreign Grants

b. Tax revenue = taxes on income and profits + GST and other indirect taxes + other taxes

c. Other Taxes include customs duties and fees

d. Other income includes revenue from sale of goods and services, income from property ownership, mining proceeds, and other miscellaneous income.

DIRECT TAXES

The Jordanian government combines two forms of direct taxes, one is related to individuals' personal income and the other is corporate from private sector. Due to the fact that only income tax directly affects individuals, this study examines its impact on poverty and inequality in Jordan. Jordan's tax system is designed to be progressive, where the first (12,000) JD of individual's income is not taxable, income between (12,000 and 24,000) JD dinars is taxed at 7%, and income over (24,000) JD is taxed at (14%). The entire tax burden is borne through workers and not by employers, and does not provide deductions for married couples or children.

INDIRECT TAXES

The GST system in Jordan plays a role similar to Value Added Tax, where some items are subject to (0.00%) percent while others are completely tax-deductible. Generally, three different GST rates will be charged on goods and services; which are (0.00%), (4%), and (16%).

Taxes have an impact on various aspects of life, which can be highlighted through the following:

First: Tax Effect on Consumer Spending

If the tax is imposed on consumer spending of taxpayer with limited income, this will lead him to reduce his consumption of goods for which the demand is characterized by high elasticity, such as luxury goods, and he turns towards goods for which the demand is characterized by inelasticity (Shawky, 2017).

As for those with high incomes, the tax deduction does not affect their consumption activity because they will maintain their standard of living, so their tendency towards consumption increases and their tendency to save decreases, as this leads them to redistribute their income between consumption and saving, and that taxes are not the only factor that affects consumption, but rather There are many considerations (Ben Korda, 2015).

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01680 | 2023.

11

Second: Tax Effect on Income

The imposition of tax will lead to a reduction in incomes available for saving among individuals, and this means that it will lead to a decrease in their savings, but the imposition of taxes on the poor classes does not affect their saving because they do not have a surplus to save. On the contrary, the high-income class will sacrifice part of its savings in order to maintain her standard of living (Konrad, Adenauer, Stiftung, 2019).

Third: Tax Effect on Production & Employment

The tax affects purchasing power of individuals and thus their standard of living and productivity, just as taxes affect the desire to work. Some believe that it leads to stimulating work in order to increase production and income and maintain a certain standard of living, which called "incentive tax" and may reduce taxes from production quantities (Konrad-Adenauer-Stiftung, 2019).

As it increases the cost of production, and this leads to a reduction in investment spending, which affects the volume of employment, while the tax exemption increases the quantity of production and helps to revitalize the economic field and increases the volume of investment spending, which leads to an increase in employment, and this is what Some countries follow it by adopting a tax policy that would exempt the profits of some activities from taxes in order to reduce the phenomenon of unemployment (AL-Tamimi & Bataineh, 2021).

Fourth: Effect of Tax on Growth Level

The forms of tax structure differ from one stage to another due to circumstances the country is going through. At the beginning of development, countries need to finance its weak primitive projects and build infrastructure, therefore, taxes with abundant revenues are required at this stage, such as consumption taxes and real estate taxes, as well staying away from profit taxes, in order to encourage savings and investment, as adopted by the capitalism (Enami, et. all, 2017). But after the state achieves broad and solid economic activities, this requires imposing direct taxes on income and wealth, and adopting escalation methods and exemptions to reduce the wide gap between high-income and low-income earners, in order to achieve tax justice and arrive to a fair distribution of income (Atamanov, et. all, 2015). Just as tax affects various aspects, it has some positive effects, as follows:

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01680 | 2023.

12

First: The Effect of Tax on Dealing With Depression

The phenomenon of depression means that there is a large supply of goods and services that exceeds the demand for them, in addition to a decrease in the prices of goods due to the low demand of individuals for them. Here, the two types of tax must be used to deal with this phenomenon by raising direct taxes on taxpayer profits, which leads them to reduce production and disable a number of workers from work, and gradually this will lead to a relative balance between supply and demand, i.e. prices begin to rise (Al-Amr, 2016).

Second: The Effect of Tax on Dealing With Inflation

The phenomenon of inflation is one of its most important manifestations, which means a large increase in monetary mass over the quantity of goods and services offered in the market, and to treat it we must reduce the overall demand and its imbalance (Al-Amr, 2016).

In order to achieve this, it is necessary to endorse new laws that impose modern tax rates or raise previous ones, which eventually decrease individuals' real income and reduce their demand for various goods and services. Indirect taxes should not be used to treat this phenomenon; especially for developing countries that suffer from weak production due to the low development of its apparatus; given the position of indirect tax structure. Therefore, these taxes must be avoided and used as a mean to address this phenomenon and raise its rate, because it will inevitably lead to an increase in inflation (AL-Tamimi & Bataineh, 2021).

RESULTS & DISCUSSION

Unit Root Test to Measure Stability of Time Series Variables

By applying the expanded Dickey-Fuller test (ADF) to test inactivity of time series included in the model expressed in logarithmic formula, results presented in table (3) indicated that all variables suffer from instability problem, where all calculated values are lower than critical values at the significant level. The expanded (ADF) test also conducted on all variables after taking first difference found that all-time series became static at a significant level of (1%), therefore the time series creating standard model are integrated at a first degree.

Table (3) expanded Dickey-Fuller test results

Variable	Level					First difference				
	Fixed limit		Fixed boundary, time vector		Result	Fixed limit		Fixed boundary, time vector		Result
	calculated	tabular	calculated	tabular		calculated	tabular	calculated	tabular	
LNM	-1.97	-3.62	-1.77	-4.22	Unstable	-7.08	-3.62	-7.76	-4.22	stable
LNDT	-1.79	-.362	-2.37	-4.22	Unstable	-5.17	-3.62	-5.17	-4.22	stable
LNIDT	-1.05	-3.62	-2.60	-4.22	Unstable	-5.93	-3.62	-5.58	-4.22	stable

* Deceleration intervals were taken based on the Schwarz criterion

Cointegration Test

Results of the unit root test showed that all variables are stationary at first difference (1) and they are mono-integration, and therefore we can conduct a Johansen Co-integration Test and because its sensitive to the autocorrelation in residuals, the lengths will begin to determine an appropriate lag periods to estimate models that do not suffer from autocorrelation problem. (Akaike) and (Schwarz) criterion will also be used to determine the length of suitable interval periods, as results of these two methods showed that optimal number of lag periods is two. Results of the co-integration test in table (4) indicate the rejection of null hypothesis that calls for no co-integration at a significant level of (1%).

Table (4) results of Johansson Co-integration test

Relationship	Trace Test	Probability	Optimum deceleration period
* none	49.5	0.0096	2
at most 1	24.1	0.0662	2
at most 2	7.1	0.3374	2

* Rejection of the null hypothesis (non-integration) at 1% level of significance

Variance Decomposition Test

It is a way to describe the dynamic behavior of model, where the prediction variance of each variable is divided into different parts, and amount of prediction variance in any variable caused by the prediction error in variable itself and in other explanatory variables. This analysis gives information on the relative importance of sudden change impact or shock on all model variables. In order to avoid the problem of contemporaneous errors' effect on model variables, the Cholaski Decomposition is resorted, which is greatly affected by the arrangement of variables in model to be tested. Therefore, it will be resorted by changing the order of model's variables used to ensure the credibility of results.

Results indicated that a large part of the forecast variance in profit margin is due to forecast error in the variable itself, forecast error in indirect tax variable, and at lesser extent to forecast error in the direct tax variable. It is clear from table (5) that after 7 periods of time, (15.17%) of the forecast error in profit margin ratio variance is due to indirect tax variable while (5.6%) is attributable to direct taxes.

Table (5) Analysis of variance components

Period	S.E.	LNM	LNDT	LNIDT
1	0.048	100	0	0
2	0.062	94.75	0.16	5.08
3	0.074	93.53	1.19	5.27
4	0.086	87.50	2.84	9.64
5	0.097	84.15	2.65	13.19
6	0.10	80.74	4.16	15.08
7	011	79.22	5.60	15.17
8	012	77.99	7.11	14.88
9	013	77.87	8.00	14.11
10	014	77.88	9.90	13.11

Bounds Test

After performing Cointegration test, we find no co-integration between the two series; at (0.05) significance level.

Table (6) Cointegration test

Null Hypothesis: no levels relationship F-Bounds test				
I(1)	I(0)	Sig	Value	Test Statistic
Asymptotic: n=1000				
3.51	3.02	10%	1.420125	F-statistic
4.16	3.62	5%	1	K
4.79	4.18	2.5%		
5.58	4.94	1%		

CONCLUSION & SUGGESTIONS

Conclusion

Results of the error correction vector model showed a significant error correction limit for profit margin ratio at level (5%), which indicates a long-term causal relationship between production, prices, and model variables of direct and indirect taxes. The short-term deviations from long-term equilibrium relationship are corrected at a rate of (3%) per year. Results showed a significant negative effect of indirect taxes on production and prices; in the long run and an insignificant impact of direct taxes, which is consistent with the nature of Jordanian economy that depends primarily on tax revenues to finance its expenditures, as well as the fact that most

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01680 | 2023.

15

manufacturing industry is small and medium-sized, and is directly affected by the indirect tax. It means that imposing such type of taxes weakens the competitiveness of Jordanian industries; in comparison with the economic openness and competition on products of countries with stronger economies. Results showed that effect of direct and indirect taxes on prices and production are not significant; in the short term. Results of variance components' analysis were in agreement with results of error correction vector; in the long term which showed that forecast variance in prices and production caused by the forecast error in indirect tax variable is greater than forecast variance dues to the forecast error in direct tax variable. Results of the response-reaction function also confirmed a negative impact of direct and indirect taxes on prices and production, which is consistent with economic theory where indirect taxes (taxes on production and imported production inputs) are directly included in the cost function for product. Therefore, any increase in this type of tax will leads to an increase in costs, which in turn decrease the profit margin ratio; as stated in third equation and this means negatively affecting the price competitiveness of sectors in Jordan.

Suggestions

Study recommends a reduction of customs duties on production requirements to decrease product cost, and thus encourage the local industry and work to raise its competitiveness in local and foreign markets, which in turn leads to an increase in sales and profits and thus increases government revenues from income taxes on profits, and this means compensating for the shortfall in revenues as a result of reducing customs duties on production inputs. Study recommends providing an appropriate infrastructure, which reduce cost of production and raise the price competitiveness of local industry and to increase the focus of industrial establishments on cost control to compensate for negative impact that indirect taxes may have on production and prices, and thus enhance price competitiveness. Researchers recommend reviewing the tax system in general in Jordan, focusing on tax justice, and activating the government's role in controlling taxes and ways they are collected or imposed. It also called for ccancellation of taxes on raw materials used in manufacturing basic commodities, foodstuffs, and medicines as well as cancellation of sales tax on consumer goods and services purchased by citizens; due to its negative effects on the standard of living of Jordanian citizens and families. Researchers recommend a reduction of taxes on oil derivatives, water, and energy expenditures such as electricity and solar energy; due to their effect on companies, factories, and citizens which leads to an increase in production and living costs.

Study also recommends the adjustment of necessary goods and services' prices; due to their negative effects on standards of living cost for citizens and companies, a reduction of interest rate on investment loans and consumer and housing loans; due to their effects on production costs and the increase in prices of all goods and services, and to increase level of salaries and wages to match cost of living continuously on regular bases.

REFERENCES

Akhor, S. O. (2016), "The impact of indirect tax revenue on economic growth: Nigerian experience", Igbinedion University Journal of Accounting, 61-87, https://researchleap.com/taxation-and-nigerian-economy-an-empirical-analysis

Al-Agha, M.J. (2005), "The Impact of Taxes on the Gross Domestic Product in Sudan during the Period (1981-2003)", master thesis, Department of Economics, College of Graduate Studies, Sudan University of Science and Technology, http://repository.sustech.edu/handle/123456789/8994?show=full

Al-Amr, Hussein (2016), "The Impact of Taxes on Manufacturing Industries in Jordan", Al-Manara Magazine, Vol. (22), ISS. (3), https://www.semanticscholar.org/author/Amr-Hussein-Al-Alawi/1423465555

Ali, A.A; Ali, Y.S.A & Damar, S.M (2018), "THE IMPACT OF TAX REVENUES ON ECONOMIC GROWTH: TIME SERIES EVIDENCE FROM KENYA", Academic Research International Vol. 9(3) September 2018, https://www.researchgate.net/publication/329864595_THE_IMPACT

AL-Tamimi, K & Bataineh, A (2021), "The effect of tax revenues on GDP growth in Jordan", Contents lists available at Growing Science, Accounting, homepage: www.GrowingScience.com/ac/ac.html

Al-Tamimi, K.A. M. (2020), "Government spending as a tool for economic growth in the economy of Jordan", Journal WSEAS Transactions on= Business and Economics, 17(17), 769-774. DOI: 10.37394/23207.2020.17.75, https://www.semanticscholar.org/paper/Government-Spending-as-a-Tool...

Åsa, J. C. H. (2008), "Tax & Economic Growth", Economics department working paper, 620, https://www.researchgate.net/publication/5205330

Atamanov, A.; Jellema, J. & Serajuddin, U. (2015), "Energy Subsidy Reform in Jordan: Welfare Implications of Different Scenarios", Policy Research Working Paper 7313, World Bank, Washington, DC, https://www.semanticscholar.org/paper/Energy-Subsidies-Reform-in-Jordan...

Ben Korda, R. (2017), "The Impact of Tax Evasion on Economic Development", Master Thesis, Department of Finance and Accounting, College of Economic, Business and Management Sciences, Abdelhamid Ibn Badis Mostaganem University, Algeria, https://www.bartleby.com/essay/The-Impact-Of-Tax-Evasion-On-Economic-P...

Enami, A.; Lustig, N. & Rodrigo, A. (2017), "Analytical Foundations: Measuring the Redistributive Impact of Taxes and Transfers." In Commitment to Equity Handbook: Estimating the Impact of Fiscal Policy on Inequality and Poverty, edited by Nora Lustig, chapter 2. Washington, DC: Brookings Institution Press and CEQ Institute, Tulane University. Advance online version; available at http://www.commitmentoequity.org /publications/ handbook.php

Konrad-Adenauer-Stiftung (2019), "The Jordanian 2019 Income Tax Law", Office country report, https://www.kas.de/documents/279984/280033/Country+Report+Incoe+Tax+Law.pdf/1f4b8617-ddd3-ffb4-1fe9 4245d4f3a3a8?version=1.0&t=1568630801952

Le, H. T. H.; Tuyet, V. T. B.; Hanh, C. T. B. & Do, Q. H. (2020), "Factors affecting tax compliance among small and medium sized enterprises: Evidence from Vietnam", The Journal of Asian Finance, Economics, and Business, 7(7), 209-217, https://www.researchgate.net/publication/343346211_Factors_Affecting...

Narayan, P. K. (2005), "The saving and investment nexus for China: evidence from Cointegration tests*",* Applied economics, 37(17), 1979-1990, 660, https://www.scirp.org/(S(czeh2tfqyw2orz553k1w0r45))/reference/...

Nawasrah, A. A. M. (2019), "The Impact of Tax Revenues on the Growth of GDP in Jordan for the Period (1992-2017)", Master Thesis, College of Economics and Administrative Sciences, Al-Bayt University, https://www.aabu.edu.jo

Nazmi, S. & Mofleh, K. (2015), "The role of tax revenues in supplying the Jordanian general budget with public revenues during (2006-2013)", Journal of the Islamic University for Economic and Administrative Studies, 23(2), https://academic.oup.com/jis/issue/23/2

Nguyen, H. H. (2019), "Impact of direct tax and indirect tax on economic growth in Vietnam", The Journal of Asian Finance, Economics and Business, 6(4), 129-137, https://www.mendeley.com/catalogue/42eed9e2-25ff-3eff-92cc-b91280f

Oktaviani, R. M., & Wulandari, S. (2023). Multinational Corporate Tax Avoidance in Indonesia. International Journal of Professional Business Review, 8(2), e01549-e01549. https://openaccessojs.com/JBReview/article/view/1549

Pham, T. M. L.; LE, T. T.; Troung, T. H. L. & Tran, M. D. (2020), "Determinants Influencing Tax Compliance: the Case of Vietnam", Journal of Asian Finance, Economics, & Business, 7(2), 65-73, https://koreascience.kr/article/JAKO202014862060697.page

Shakatreh, M., Moh'd Ahmad Mansour, A., & Alatyat, Z. A. (2022). Corporate Tax Features in Jordan Affecting Business Decisions: Strengthening Finance Accountability in Emerging Economies. *International Journal of Professional Business Review*, *7*(4), e0739-e0739. https://openaccessojs.com/JBReview/article/view/1549

Shawky, M. A. (2017), "Analytical Macroeconomics", Knowledge Facility, Alexandria, Egypt*,* http://www1.aucegypt.edu/src/macroeconomics

The Central Bank of Jordan during the period (2011-2020), https://www.cbj.gov.jo/

The Jordanian Ministry of Finance during the period (2011-2020), https://mof.gov.jo/en-us/mainpage.aspx

The Word Bank (2019), https://thedocs.worldbank.org/en/doc/259801562965232326-0270022019/original/2030Agenda2019finalweb.pdf

The World Bank (2000), https://data..org/indicator/GC.TAX.TOTL.GD.ZS?locations=US