

Exploring Stock Market Variables and Weighted Market Price Index: The Case of Jordan

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Abstract

The main aim of the study is to provide empirical evidence about the association between stock market exchange data and weighted price index. This research utilized monthly reported data from the Amman stock exchange market (ASE) and the Central Bank of Jordan (CBJ). The weighted price index was employed as the dependent variable and the independent variables were weighted price index (WPI), turnover ratio (TOR), number of trading days (NTD), price-earnings ratio (PER), and dividends yield ratio (DY). The time period of the study was from January 2015 to October 2020. The study's methodology follows a quantitative approach using the multiple regression method to test the hypotheses of the study. The final results of the study provided conclusive evidence that the market-weighted price index is strongly and positively correlated to three predetermined variables, namely; turnover ratio, price-earnings ratio, and dividend yield but no evidence was obtained for the effect of the number of trading days. The finding of the current study proved that the market price index is not only influenced by macro factors, but also by other variables assumed to not beneficial for the judgment of price index movements.

Keywords: Weighted Price Index, Trading Days, Turnover Ratio, Dividend Yield Ratio, Jordan

JEL Classification Code: G12, G14, G17

1. Introduction

Nowadays countries worldwide every year seek economic environment enhancement; such enhancement can be measured by the volatility of the stock price index; the measurement of stock price index relies on several macro and micro conditions that cause upward and downward movement of the price index responding to such conditions. Therefore, price index results in any country cannot be separated from investment indicators reported in the market. And due to its strategic importance, without investment efficiency, economic growth will tend to backtrack. Several markets disclose both financial information, which is proved

to have a great impact on the movement of the stock price index; thus, such financial and even nonfinancial information is regarded as one of the crucial indicators that are reflected in the stock price index (Inglis, 2014).

The stock market is an important part of the economy of a country. The stock market plays a pivotal role in the growth of the industry and commerce of the country that eventually affects the economy of the country to a great extent. That is the reason why government, industry, and even the central banks of the country keep a close watch on the happenings of the stock market. The stock market is important from both the industry's point of view as well as the investor's point of view. The main reason for investors to trade in the market is to earn profits (Tandelilin, 2010), therefore as long as investors sell or buy shares or bonds in the market in a continuous manner the stock price index tends to follow this behavior the following year. Thus, it could be said that the stock market trading information plays a primary role in supporting the economic growth of the country in all economic sectors. Furthermore, markets play the most important role in supporting the growth of the industry and commerce in the country. This is the reason that a rising in a stock market index is regarded as a sign for development and a growing economy of the country (Oseni & Nwosa, 2011; Bulat et al., 2017).

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It is common knowledge that the stock market is affected by highly interrelated economic, social, political internal, and external factors and such factors interact with each other in a very complicated manner. Therefore, it is generally difficult to identify the effective factors on the stock price index. Over the past few decades, the interaction of the stock market with both macroeconomic and microeconomic variables has been an interesting case study for the association between these variables and price index in both developed and more developed countries (Rad, 2011). Therefore, it is generally difficult to identify the effective factors that impact the stock price index. Over the past few decades, the association of the stock market with both macroeconomic and microeconomic variables have been an interesting case study in both developed and more developed countries (Rad, 2011; Lee & Brahmasrene, 2019).

This study is different from those of prior research in investigating new domestic market-based variables that are expected to provide empirical evidence about the association between markets disclosed information and weighted price index. This investigation is also considered remarkable on the ground that such market variables are rarely examined by previous literature. The research findings are expected to provide beneficial information to investors regarding the market information that could influence the movements of the stock price index and thus helps them to make efficient investment decisions in the Jordanian capital market. Further, the results of this study are also expected to be beneficial to government policymakers in implementing the growth level they seek in the economy. Besides, the results can also be useful for the management of the stock exchange market by understanding which type of information affects the stock price index. Moreover, the study is also structured to improve financial management knowledge and encourage further research about market variables and stock price index.

Theoretical background and hypotheses development are provided in the second part of the study and the third part focuses on methodology and data collection. The fourth part shows the results and discussion, and the final part is the conclusions and recommendations.

2. Theoretical Backgrounds

2.1. Price Index

Traditionally, when people say that the market is performing well or the market is down today, actually they are referring this statement or conclusion to an index. With the growing importance of the stock market in our country, the Price Index (PI) has become a familiar term especially for the investing community in their everyday vocabulary. Price indices calculated for the first time at May 26, 1896, after that the Dow Jones index was appeared as the second-oldest among the U.S. market indices. It was created by

Charles Dow, the editor of *The Wall Street Journal* and the co-founder of Dow Jones & Company, and named after him and his business associate, statistician Edward Jones. At that time, it contained 12 of the biggest public corporations in the United States. Nowadays, the Dow Jones Industrial Average (DJIA) includes 30 of the largest and influential entities in the United States. Similar to Dow Jones, the NASDAQ, S&P 500, Nikkei, and the Sensex, are widely known market indices globally for investors, which provide investors the direction of the entire stock market. Investors usually use indices to track the performance of the stock market. Theoretically, the movement in the stock price index reflects an exactly proportional change in the stocks included in the index.

The most basic purpose of stock price indices is to provide a measure for understanding the direction or the movements of the market as a whole. The increase of index indicates a rising market and the decrease indicates a falling market. In the market, indices help investors and users to know the market return because it represents the rate of return earned by investing in a portfolio that reflects the market portfolio (Nguyen & Nguyen, 2020). Market return and risk are traditionally used as primary indicators to judge the investment performance of market portfolios. Technical analysts try to predict future price movements by tracking the behavior of past price trends. Furthermore, market indices also enable us to examine variables that influence aggregate share price movements; stock analysts, portfolio managers, and academics investigate these factors that impact the performance of the market.

Communally, there are three types of stock market indices. They are price-weighted, value-weighted, and equally-weighted indices. The difference between the three types is based on their construction. The first type is the price-weighted index where the price of each stock receives the same weight. The price-weighted index is a type of stock market index in which each component of the index is weighted according to its current share price. It is constructed as the arithmetic mean of current prices of the stock that constitutes the index. An example of the price-weighted index is the Dow Jones Industrial Average DJIA. The second type is the value-weighted index (or cap-weighted index) where each stock is given a weight equal to its value; to find the value of a cap-weighted index, we can multiply each component's market price by its total outstanding shares to arrive at the total market value. The proportion of the stock's value to the overall total market value of the index components provides the weighting of the company in the index. This type is considered the most widely used index construction methods, the most familiar weighted index is the S&P 500 Index. The last type is the equally-weighted index, it's an index where the change of each stock is given the same weight. An equal-weighted index is a stock market index – comprised of a group of publicly traded companies. – that invests an equal

amount of money in the stock of each company that makes up the index. Thus, the performance of each company's stock carries equal importance in determining the total value of the index. Sometimes this is referred to as an unweighted index. In the construction of an equally weighted index, all stocks carry equal weight regardless of price or market value.

2.2. Related Literature and Hypothesis

2.2.1. Market Factors Effect Price Index

The stock price index is a movement indicator of stock prices in the capital market, which has functioned as its trend indicator. The movement of the stock price index is the source of information for investors for making investment decisions in the capital market (Bodie, 2014; Rusmita, Rani, Swastika, & Zulaikha, 2020).

2.2.2. Turnover Ratio

In emerging markets, the positive outcomes of this ratio have shown an upward increase in the price index, which resulted in economic improvements. Efficient stock markets usually report good turnover ratios, this ratio represents the investor's amount of cash converted to stocks which increases the market liquidity. The positive effect of the high turnover rate is to motivate and encourage investors to convert stocks into cash or convert cash into stocks, thereby increasing market trading volume. On the contrary, the lower turnover ratio negatively influences the market and result in investors moving away from the market (Nguyen & Truong, 2020).

A considerable amount of previous literature has highlighted the association between stock prices and variables such as turnover ratio represented by the trading volume (TV). TV refers to the total number of shares or contracts exchanged between buyers and sellers of security during trading hours on a given day. The volume of trade is a measure of the market's activity and liquidity during a set period of time. Beaver et al. (2012) pointed out that the increase in the TV of stocks in the market tends to attract more investors and increase the demand for such stocks and hence the stock value rises and accordingly affects the price index. Other researchers also recognized TV as a good predictor of changes in stock price behavior. They assumed that TV represents the willingness of investors to purchase stock from the market and hence, the more demand in the market for stocks will cause a rise in the value of stocks which in turn influence price indices (Johansson & Wilandh, 2005; Mehdi et al., 2012; Ouarda et al., 2013; Karpoff, 1987; Lo & Jiang, 2000; Tkac, 1999; Kim & Kim, 2019).

In this regard, also a number of prior studies such as the study of Hachicha (2010) found that investor's behavior strongly significantly impacts stock price indices such

as market returns and trading volume (Hachicha, 2010). Additional evidence obtained from the US market supports the definite relationship between the market variables such as trading volume and investor's behavior. In the same stream, the finding of Jlassi and Bendaïda (2014) also revealed a strong effect for market return and trading volume on the price index. Based on the previously discussed argument our first hypothesis is:

H1: weighted price index is associated with the monthly average of trading volume of stocks in the market.

2.2.3. Number of Trading Days

Regarding the effect of the number of trading days on the stock price index, no previous literature was found investigating this effect. Hence, from the researchers' general knowledge, the number of trading days is expected to have a positive relationship with the price index because if the average monthly trading days in the market are increased, more time is available for investors to trade in the market. Therefore, as the number of days increases, the liquidity of the market will react positively or negatively depending on the investor's trading decisions and consequently, the price index will respond to the number of trading contracts in the market. Based on these mentioned facts our second hypothesis is:

H2: weighted price index is associated with the average number of trading days in the market.

2.2.4. Market Returns (Price Earnings Ratio)

The price-earnings ratio is assumed to have great explanatory power on the market price index. Market returns for all sectors represented by the price-earnings ratio is regarded as a strong motivator for companies to raise their investment in the market by issuing more shares to benefit from higher returns (Shoil & Zakir, 2011). Similarly, individual investors in the market are also highly influenced by such earnings and continuously increase their investments as long as market return provides them with acceptable income. This result was found by the study of Hachicha (2010) who found that investor's behavior significantly impacts the stock prices such as market return and trading volume. Ouarda et al. (2013) employed three elements of the market return, trading volume, and volatility of the market in their investigation of the investor's behavior of European markets. By analyzing the market data of the European market, they revealed that substantial volatility and trading volume greatly impact the behavior of investors during the down market (Ouarda et al., 2013).

It is unanimous fact that economic growth and market development are usually captured or measured by the

movements of the price index. Mohtadi and Agarwal (2004) found a significant relationship between stock market development and some variables such as turnover ratio. Their study sample was 21 emerging countries and covered a period of twenty years from 1977 to 1997, and they employed a dynamic panel method to reach this conclusion. Similarly, Billmeier and Massa (2009) found that market income from shares influences the market development for 17 emerging stock markets in the Middle East and Central Asia. Based on prior discussion our third hypothesis is:

H3: *weighted price index is associated with the average of the price-earnings ratio for the market.*

2.2.5. Dividends Yield

Dividends have played a significant role on investor's decisions during the past 50 years. Dividend-paying stocks are like the Volvos of the investing world. They are not fancy at first glance, but they have a lot going for them when you look deeper under the hood. Looking at average stock performance over a longer time frame provides a more granular perspective. From 1930–2019, dividend income's contribution to the total return of the S&P 500 Index averaged 42%. Looking at S&P 500 Index performance on a decade-by-decade basis shows how dividends' contribution varied greatly from decade to decade (Hartford Funds, 2020). For investors, dividends serve as a popular source of investment income. When the market reports a high dividend yield, this encourages investors' additional investment in the market. Furthermore, dividends yield also serves as an announcement of market success on the ground that dividends are issued from a company's retained earnings, and only companies that consistently are substantially profitable issue dividends. Therefore, when the market displays consistent or at least stable dividends, they become more attractive to investors, and accordingly the stock price increases followed by price index increases.

Recently, the dividend yield has been regarded as one of the most significant indicators for both companies and sole investors to judge market efficiency; consequently, many investment decisions in the market relied on this indicator (Tandelilin, 2010). For many investors, capital markets are seen as an investment place to obtain dividend yield and capital gains as well as obtaining short and long-term ownership rights. Whenever market results show satisfying dividend payments for a company's shares, investors tend to raise their expectations about market efficiency, and hence price index is expected to act positively or negatively according to the dividend yield (Bilson et al., 2001; Humpe & Macmillan, 2007). Based on this argument our fourth hypothesis is:

H4: *weighted price index is associated with average dividends yield in the market.*

2.2.6. Jordan Economy an Overview

The Jordanian economy is classified as a newly developed market economy. Jordan's GDP per capita rose by 351% in the 1970s, declined 30% in the 1980s, and rose 36% in the 1990s (TJT, 2015). For the next ten years, after 1990, the Jordanian economy had grown at an annual rate of 8% between 1999 and 2008. However, Jordan's economy in the past few years has grown at a very slow rate, averagely around 2%. A substantial increase of the population, coupled with low economic growth rates and with rising public debt led to a worsening of poverty and unemployment in the country. As of 2019, Jordan boasts a GDP of US\$44.4 billion, ranking it 89th worldwide (JTJ, 2016).

Jordan has Free Trade Agreements (FTAs) with the USA, Canada, Singapore, Malaysia, the European Union, Tunisia, Algeria, Libya, Turkey, and Syria. More FTA's are planned with Iraq, the Palestinian Authority, the GCC, Lebanon, and Pakistan. Jordan is a member of the Greater Arab Free Trade Agreement, the Euro-Mediterranean FTA, and the Agadir Agreement, and also enjoy advanced status with the EU (JTJ, 2011).

Jordan is an emerging knowledge economy. The main obstacles to Jordan's economy are scarce water supplies, complete reliance on oil imports for energy, and regional instability. Just over 10% of its land is arable and the water supply is limited. Rainfall is low and highly variable, and much of Jordan's available groundwater is not renewable. Jordan's economic resource base centers on phosphates, potash, and their fertilizer derivatives; tourism; overseas remittances; and foreign aid. These are its principal sources of hard currency earnings. Lacking coal reserves, hydroelectric power, large tracts of forest, or commercially viable oil deposits, Jordan relies on natural gas for 10% of its domestic energy needs. Jordan used to depend on Iraq for oil until the American-led 2003 invasion of Iraq.

Jordan's economy in the past few years has grown at a very slow rate, averagely around 2%, this is attributed to a decrease in tourist activity due to regional turmoil, increased military expenditure for border protection and maintaining civil security, electrical company debts due to attacks on Egyptian pipeline, accumulated interests from loans, the collapse of trade with Iraq and Syria and increased expenses from hosting 1.4 million Syrian refugees. According to the World Bank, Syrian refugees have cost Jordan more than \$2.5 billion a year, amounting to 6% of the GDP and 25% of the government's annual revenue. With the presence of Syrian refugees in Jordan, the downturn that began in 2011, continued to 2018. All of this has contributed to the swelling of Jordan's public debt, which reached 90% of its GDP in 2016. The regional situation has made Jordan increasingly reliant on foreign aid.

Jordan's total foreign debt in 2011 reached about \$19 billion, representing 60% of its GDP. Moreover, in 2016, the debt reached \$35.1 billion, representing 93.4% of its GDP (Kirk, 2016). The country's top five contributing sectors to GDP, government services, finance, manufacturing, transport, and tourism and hospitality were badly impacted by the Syrian civil war. Foreign aid covers only a small part of these costs, 63% of the total costs are covered by Jordan. An austerity program was adopted by the government which aims to reduce Jordan's debt-to-GDP ratio to 77% by 2021. The program succeeded in preventing the debt from rising above 95% in 2018 (TJT, 2019; Obeidat, 2016).

The Kingdom of Jordan is classified by the World Bank as an upper-middle-income country. According to the Heritage Foundation's Index of Economic Freedom, Jordan has the third freest economy in the Middle East and North Africa, behind only Bahrain and Qatar, and the 32nd freest in the world. Jordan ranked as having the 35th best infrastructure in the world, according to the World Economic Forum's Index of Economic Competitiveness. The Kingdom scored higher than many of its peers in the Persian Gulf and Europe like Kuwait, Israel, and Ireland.

The 2010 AOF Index of Globalization ranked Jordan as the most globalized country in the Middle East and North Africa region. Jordan ranked as the 9th best outsourcing destination worldwide. Jordan's banking sector is classified as "highly developed" by the IMF along with the GCC economies and Lebanon (JTJ, 2019). The Jordanian market is regarded as one of the most developed Arab markets outside the Persian Gulf states. Jordan market has ranked 18th on the 2012 Global Retail Development Index, which lists the 30 most attractive retail markets in the world. Jordan was ranked as the 19th most expensive country in the world to live in 2010 and the most expensive Arab country to live in (CBJ, 2013).

2.2.6.1. Amman Stock Exchange (ASE)

Amman stock exchange (ASE) was established in March 1999 as a non-profit, private institution with administrative and financial autonomy. It is authorized to function as an exchange for the trading of securities. The exchange is governed by a seven-member board of directors. A chief executive officer oversees day-to-day responsibilities and reports to the board. The members of ASE are Jordan's 68 brokerage firms. Amman Stock Exchange became a state-owned company under the name "The Amman Stock Exchange Company (ASE Company)" on February 20, 2017 (ASE, 2018).

The ASE is committed to achieving several principles such as fairness, transparency, efficiency, and liquidity. The exchange mainly seeks to preserve a strong and secure environment for trading securities while protecting and

guaranteeing the rights of its investors. To provide this transparent and efficient market, the ASE has implemented internationally recognized directives regarding market divisions and listing criteria. To comply with international standards and best practices, the ASE works closely with the Jordan Securities Commission (JSC) on surveillance matters and maintains strong relationships with other exchanges, associations, and international organizations (ASE, 2018). The exchange is an active member of the Arab Federation of Exchanges, Federation of Euro-Asian Stock Exchanges (FEAS), and a full member of the World Federation of Exchanges (WFE) (ASE, 2018).

The ASE is demanded to provide companies with a means of raising capital by listing on the Exchange, motivating an active market in listed securities based on the effective determination of prices, fair and transparent trading. Moreover, providing modern and effective facilities and means for trading the recording of trades and publication of prices, monitoring and regulating market trading, and coordination with the JSC as necessary, to ensure compliance with the law, a fair market and investor protection, setting out and enforcing a professional code of ethics among its member directors and staff, and ensuring the provision of timely and accurate information of issuers to the market and disseminating market information to the public (ASE, 2018).

3. Methodology

3.1. Sample and Data

The data of the study was collected from monthly and annual reports of both the Amman stock exchange (ASE) and the Central Bank of Jordan (CBJ). The data covered the period from January 2015 to September 2020. The sample of the study is obtained based on monthly observations. The numbers of observations were 65 observations after excluding the first three months of 2020 due to the COVID-19 pandemic when the Amman stock exchange was closed.

3.2. Method

The study follows a quantitative empirical method of research and uses real financial market data to examine the relationship between the independent and dependent variables of the study. The researchers employed multiple and simple regression for testing the hypotheses of the study: the multiple regression model is as follows:

$$\text{Log WPI} = \alpha + \beta_1 \text{TOR} + \beta_2 \text{NTD} + \beta_3 \text{PER} + \beta_4 \text{DY} + E$$

The model's dependent and independent variables and their estimated correlations are shown in Table 1.

Table 1: Model Variables

Variable	Variable Notation	Type	Variable description	Estimated Correlation
Weighted price index	WPI	Dependent	The log for the monthly average of weighted price index in the stock market	–
Turnover ratio	TOR	Independent	The monthly average for the number of traded stocks in the market	Positive
Number of trading days	NTD	Independent	The monthly average of trading days in the market	Positive
Price-earnings ratio	PER	Independent	The monthly average of price-earnings ratio in the stock market	Positive
Dividends Yield	DY	Independent	The monthly average of dividends yield of the stock market	Positive

Table 2: Descriptive Statistics of Model Variables

Variable	Minimum	Maximum	Mean	Std. Deviation
WPI	2879.75	4376.51	3628.05	426.59
NTD	0	20.83	18.93	6.08
TOR	0	27.21	22.90	6.79
PER	9.74	23.24	14.66	4.31
DY	1.03	5.80	4.50	1.35

N = 65 months.

4. Findings and Discussion

4.1. Descriptive Statistics

The descriptive statistics of the study's variables are shown in Table 2, the average weighted price index was 3628.05 point, and this value fluctuated between the minimum value of 2879.75 points and the maximum value of 4376.51 points. This result seems to be admirable because the mean of the index is closer to the maximum value rather than the minimum value. In other words, the price index through the whole tested period is relatively high. The average number of trading days (NTD) is 18.93 days in a month. This result indicates that the average trading days are closer to their maximum value of 20.83 days in a month; this result proves that the stock market in general opened for stock trading more than 86% for all months.

The trading volume of stocks represented by the turnover ratio shows a mean of approximately 23000 daily traded stocks in the market. The maximum number of traded stocks was 27210. Thus, the average was acceptable as a monthly amount for traded stocks. The monthly average price-earnings ratio shows a mean of 14.66% of the Jordanian Dinar (JD). The maximum value was approximately 23% of JD. The mean result proves the remarkable return to market investors. As for the dividend yield variable, the mean

Table 3: Multiple Regression Results

Model	<i>R</i>	<i>R</i> Square	Adjusted <i>R</i> Square	<i>F</i>	Sig
1	0.952	0.907	0.896	80.612	0.000

Predictors: DY, NTD, PER, TOR.

is 4.50% of JD which is closer to the maximum value of 5.80% of JD. In general, statistical results provide evidence that the Jordanian stock market is working efficiently and this efficiency consequently will have a great impact on economic growth.

4.2. Results and Discussion

The multiple regression results that are presented in Table 3, provides convincing evidence for the validity of the study's model. The results show that the model was fit for the proposed hypothesis. This fitness was significant; the *F*-test value was 80.612 at sig. = 0.05 level. Therefore, the Adjusted *R* Square result empirically approves that the independent variables (DY, NTD, PER, TOR) explained approximately 90% of the change in the dependent variable (WPI). This provides evidence for the existence of a significant correlation between the independent variables and the dependent variable of the study. Consequently, the study's predetermined hypothesis is accepted.

Before discussing the independent variables regression results, we found that there was no multicollinearity problem between the independent variables. The results in Table 4 show that the variance inflation factor (VIF) for all independent variables was below (10) which is a common cutoff value according to Hair et al. (2010). With reference to the same Table 4, the coefficient results indicate that the turnover ratio (TOR) ratio is positively correlated with the stock price index as expected ($B = 22.843$; t -value = 3.444; sig < 0.05). As previously discussed, trading volume represented by turnover ratio is recognized as one of the

Table 4: The Multiple Regression Model Coefficients

Variables	Unstandardized Coefficients	Standardized Coefficients	T	Sig.	Collinearity Statistics
	(B)	(Beta)			VIF
(CONSTANT)	1981.105		19.239	0.000	1.380
NTD	−1.860	−0.318	−1.267	0.214	1.491
TOR	22.843	0.364	3.444	0.000	1.334
PER	83.109	0.840	15.381	0.000	1.664
DY	94.352	0.299	5.538	0.000	1.905

Dependent variable: WPI.

Independent variables: DY, NTD, PER, TOR.

Table 5: Hypotheses Decisions

Hypothesis	Pearson corr.	sig	Coef.	T-Value	sig	F-Value	sig	Decision
H1: WPI vs. TOR	0.471	0.000	22.843	3.444	0.000	80.612	0.000	Accepted
H2: WPI vs. NTD	0.258	0.395	−1.860	−1.267	0.214	80.612	0.000	Rejected
H3: WPI vs. PER	0.844	0.000	83.109	15.381	0.000	80.612	0.000	Accepted
H4: WPI vs. DY	0.617	0.000	94.352	5.538	0.000	80.612	0.000	Accepted

market factors that show the level of market liquidity and this ratio enhances index price increase and more returns are expected for investors. This result agrees with the findings of Beaver et al. (2012), Johansson and Wilandh (2005), Mehdi et al. (2012), Ouarda et al. (2013), Karpoff (1987), Lo et al. (2000), and Tkac (1999).

The results of price-earnings ratio (PER) are positively correlated to the price index ($B = 83.109$, t -value = 15.381, $\text{sig} < 0.05$). This result confirms that market returns for all sectors represented by the price-earnings ratio strongly justify the changes of price index similar to many of the previous research conclusions (Shoil & Zakir, 2011; Hachicha, 2010; Ouarda et al., 2013; Mohtadi & Agarwal, 2004; Billmeier & Massa, 2009).

The results of dividends yield (DY) are positively correlated to the price index value ($B = 94.352$; t -value; 5.538; $\text{sig} < 0.05$). Dividends serve as a popular source of investment income. When the market reports a high dividend yield, this encourages investors to make additional investments. Thus, when market display consistent dividend they become more attractive to investors. Our results of dividends yield confirm this conviction about the market that, the more investors benefit from stock ownership the more stock price naturally increases, and accordingly the market price index increases. Our results are consistent with Tandelilin (2010), Bilson et al. (2001), and Humpe and Macmillan (2007). The regression result of the number of

trading days (NTD) has shown an unexpected correlation. It is negatively and insignificantly correlated to the price index ($B = -1.860$; t -value; -1.267 ; $\text{sig} = 0.214$). The possible explanation for this result is that market efficiency could be achieved irrespective of the monthly traded day; that means, investors can decide how much to sell or buy in the market with the minimum days available for them and this does not affect the number of trading days available in the market.

Taken together, our findings suggest that, despite the market being newly developed in comparison to other developed markets worldwide, the study results revealed that the Jordanian market price index proved to have an admirable reaction to market factors. However, these results prove empirically that the price index in Jordan rationally acts with market and investor behavior. The final results encourage more attention and pursuit of price index as an indicator of market efficiency and consequently economic development and growth.

5. Conclusions and Implications

Many of previous research had focused on the movement of the price index and its correlation with external or internal macroeconomic factors, but not many researchers analyzed market reported variables such as turnover ratio, number of days for trading, price-earnings ratio, and dividend yield and their effect on the price index; The current study aimed to

provide empirical evidence about this association. The study was applied to the Jordanian stock market for the period from 2015–2020. The results revealed that the market-weighted price index is strongly and positively correlated to three predetermined variables, namely turnover ratio, price-earnings ratio, and dividend yield, but no evidence was obtained for the effect of the number of trading days on the price index.

The finding of the current study proved that the market price index is not only influenced by macro factors but also by other micro variables that have not been considered in previous research and studies. Such findings are important and useful for companies, individual investors, and policymakers to correctly view the stock market. Furthermore, this research can also contribute to the academic field, which can be a reference for further research regarding the “other variables” expected to influence stock price indices.

The study results can provide implications for the practical benefits of market variables such as:

- i. Disclosed market data provide useful information to companies, individual investors, the general public, and the government and helps view the stock market properly to make the necessary investment decisions. In contrast, the absence of such information to investors increases the uncertainty in decision making.
- ii. Market price index must be regarded as a function of the movements of many variables in the market, whether external or internal; no variables should be ignored or underestimated.

This research has some limitations which, nonetheless, did not affect the results of the study. One limitation that is of concern is the absence of data for three months at the beginning of 2020 due to the effect of the COVID-19 pandemic where the market at the time was closed. The second limitation linked to the sample of the study is that although the number of observations (65 observations) covered six years, this number in other research is considered too small to generalize conclusions. As for recommendations and future research, the study’s findings suggest several courses of action for investors, companies, policymakers, and academics as follows:

- i. The use of several diversified market data for investigating the movements of the price index.
- ii. In-depth investigation of the effect of other financial variables such as solvency ratios, liquidity ratios, and nonfinancial data such as foreign investment percentages and governance variables on the stock price index.
- iii. For qualitative information, dummy variables may be suggested to specifically capture quantifiable factors that could influence the price index.

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