# WORKING CAPITAL MANAGEMENT AND PROFITABILITY: EVIDENCE FROM SELECTED STEEL MANUFACTURING COMPANIES IN INDIA

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## ABSTRACT

*This research study explores the relationship in the midst of Working Capital Management components and the profitability of steel manufacturing companies in India. The investigation is done putting down four different hypotheses.*

*The sample units include 40 steel manufacturing companies operating in Indian market; the companies were selected using convenience random sampling. The variables were collected from 2004 to 2016. The relationship between variables have been established by framing the panel data and checked using descriptive analysis, Pearson correlation and regression line on E-Views 8 statistical software.*

*The study results exhibit that there is a significant relationship between dependent variables (Net Profit and Return on Assets) and independent variables. It was found that receivables collection period, inventory holding period and Cash Conversion Cycle had symbolic impact on the profitability of companies.*

*Working Capital Management is one of the vital areas of management, and has a noteworthy impact on the profitability of company. Indian steel manufacturing companies should reduce their Cash Conversion Cycle; hence cash conversion has negative significant relationship with net profit.*

*Keywords: Working capital management, Indian steel manufacturing sector, Panel data, Profitability. ROA.*

**Introduction:**

Working capital management is challenging task since it consists of managing various concepts of current assets, current liabilities along with managing cash, stock movement, trade receivables and trade payables as well. All these elements are inter-connected and affect the other; therefore there is always a risk to be managed. Managing one component in working capital may affect the other components and hence increasing the delicacy of the task; this means that there is always a risk-return trade off involved with working capital decisions (Al-Debi'e, 2011). Working capital is considered as a life blood of company because most of its components are used on daily basis compared to non-current assets.

The overall success of a company relies mostly on the capability of financial manager to manage all the components effectively. There is a very close relationship between working capital components and profitability of firm and this relationship plays a vital role in creating value for shareholders. Components such as company's inventory management policy, debtor's management policy and creditor's management policy are crucial for profitability performance (Vishanani & Bhupesh, 2007). Firms can maximize their value by maintaining optimal level of working capital. Large inventory and generous trade credit policy may lead to favourable sales and also

reduces the risk of a stock-out. Trade credit may stimulate sales because it allows a firm to access product quality before paying (Reheman & Nasr, 2007). In the view of working capital management and their impact on profitability of firm, numerous studies were conducted and results varied over the period of time. However, few studies on working capital management and profitability have been carried in India, especially on steel manufacturing industry. The steel manufacturing industry in India saw a sharp growth in the past decades and it supported the economic development. Working capital management has become one of the most important issues in organizations where many financial managers struggle to identify basic working capital drivers and appropriate levels of working capital (Nazir & Afza, 2009). Considering the importance of working capital, this study aims to examine the relationship between working capital management and profitability in operating steal manufacturing companies in India. The core objective of this study is to scrutinize the relationship between working capital components and profitability of firm by conducting empirical analysis of 40 Indian steel manufacturing companies over a period of 13 years from 2004-2016.

In this study the working capital management is represented by CR (Current Ratio), RCP (Receivable Conversion Period), PDP (Payable Deferred Period), ITR (Inventory Turnover Ratio), CCC (Cash Conversion Cycle) and CCR (Cash Conversion Ratio). This study is trying to find the answer to the following research questions;

- What is the impact of working capital components on the profitability of steel manufacturing companies from the period of 2004 to 2016?
- How the Receivable Conversion Period (RCP) does affect the profitability of steel manufacturing companies in India?
- How the Payable Deferred Period (PDP) does affect the profitability of steel manufacturing companies in India?
- How the Cash Conversion Cycle (CCC) does affect the profitability of steel manufacturing companies in India?

**Review of Literature:**

(Marobhe, 2014) assessed the relationship between working capital management and profitability of twelve manufacturing companies listed in East African stock exchange during the period, 2005-2012. This study used ROA and Operating Margin as dependent variables whereas Current ratio, Quick ratio, Cash Cover Ratio, Inventory holding period, Receivables Collection Period, Payable Deferred Period and Cash Conversion Cycle are used as independent variables, while Sale growth, Debt ratio, and Company size are used as control variables. It was observed that there exist a notable relationship

between cash conversion components and profitability using Pearson correlation and multiple regressions.

Quayyum (2012) investigated the relationship between working capital management and profitability of manufacturing firms from 2005 to 2009. The purpose of study was to explain the optimum level of working capital in order to maximize the profitability. Similar ingredients of working capital management and profitability were considered as in (Marobhe, 2014). With the sample size of four industries, this study concluded that except in food industry, all other selected industries exhibit a significant level of relationship in profitability indices and various working capital components in addition to that; there is a valid relationship that varies from industry to industry.

(Lingesiya & Nalini, 2011)determined the relationship between working capital management and firm's performance on the basis of various components of working capital; cash conversion cycle, current ratio, quick ratio, stock to current assets and return on total assets as a variable of profitability. This study used *estimated equation* on 30 manufacturing corporations which are listed companies during the period 2006-2010, and indicated that excessive investment in inventories and receivables lead to lower profitability and current assets to total assets lead to higher profitability. The result concluded that there is a strong relationship between working capital management and performance.

(Almazari, 2013)empirically examined the relationship between the Working Capital Management (WCM) and firm's profitability on 13 Saudi cement manufacturing companies during 2008-2012, a period of 5 years. He proposed a model that addressed four hypotheses namely; H1: Liquidity position has significant impact on profitability, H2: Size has notable impact on profitability, H3: There is significant relationship between debt financing and profitability and H4: Working capital management has noteworthy impact on profitability. The study results proved that current ratio affects the profitability, and as the size of firm increases, the profitability also increases. Moreover, when debt financing increased, profitability declined. He analysed that, liner regression test confirmed a higher degree of association exist between the working capital management and profitability.

(Gill, Biger, & Mathur, 2010) investigated the relationship between Working Capital Management and profitability by taking 88 U.S firms listed on New York Stock Exchange. The core focus of this study was Cash Conversion Cycle. The database was built from 300 financial-reports from 2005 to 2007. On the basis of cross sectional yearly data analysis applying correlation and regression analysis, the findings indicated that slow collection of receivables is correlated with low profitability and profitability can be improved by giving less credit period to customers. In addition, it is suggested to low profitable firms to

decrease their accounts receivable cycle in an attempt to reduce the gap in Cash Conversion Cycle.

(Dong & Su, 2010) tried to investigate the relationship that exists between profitability and the Cash Conversion Cycle and its components for listed firms in Vietnam stock market. The investigation was based on secondary data of 130 firms for the period 2006-2008. The outcome of study found that there is a negative relationship among number of day's accounts receivable, number of day's inventories, cash conversion cycle and profitability. The study suggested that the managers can create a positive value for the shareholders by handling adequate Cash Conversion Cycle and keeping each different component to an optimum level.

Further, in an investigation conducted by (Jayarathne, 2014, February) based on the data collected between 2008 and 2012 from listed manufacturing companies in the Colombo Stock Exchange, it is suggested that the profitability is negatively associated with the account receivable period, inventory turnover period, and cash conversion cycle and it was found that the profitability is positively associated with account payable period. Therefore, the findings of paper revealed that manufacturing companies can boost their performance in terms of profitability by managing working capital appropriately.

(Mousavi & Jari, 2012) evaluated the relationship between Working Capital Management and corporate performance. The research hypotheses were tested with financial statements' data of 56 companies listed in Tehran Stock Exchange. The research results show that there is a positive relationship between Working Capital Management (NLB) and corporate performance. One another study conducted by (Pouraghajan & Emamgholipourarchi, 2012) proved that there is a significant relationship between Working Capital Management and profitability criteria of company but there is no significant relationship with the criterion of market value of company, and the management can increase the profitability of company through reducing Cash Conversion Cycle and total debts to total assets ratio.

In a recent study (Bhatia & Srivastava, 2016) found negative relationship between the Working Capital Management and firm performance. The analysis was done over a long time across 2000–2014 by using Ordinary Least Square (OLS), fixed- and random-effects model and Generalized Method of Moments (GMM) on 2,327 firm-year observations, a panel data of 179 companies listed on the S&P BSE 500 Index of Bombay Stock Exchange (BSE). Based on the results, it was suggested that there is a dire need to efficiently manage the Working Capital Management for enhanced performance.

**Research Methodology:**

The research is based on secondary data and the information is collected from steel manufacturing companies from 2004 to 2016. The sample data used in this study was obtained from 40 companies with total observation of 520. The sample unit was selected using convenient random sampling. Moreover, the panel data regression (cross-sectional and time-series) was analysed with E-Views 8 statistical software package. In order to look over the impact of Working Capital Management on profitability of companies in steel manufacturing sector in India, the current study used two dependent variables such as Net Profit (NP) and Return On Assets (ROA) and various independent variables like CR (Current Ratio), RCP (Receivable Conversion Period), PDP (Payable Deferred Period), ITR (Inventory Turnover Ratio), IHP (Inventory holding period), CCC (Cash Conversion Cycle) and CCR (Cash Conversion Ratio). However, the control variables for this research design are Financial Debt Ratio (FDR) and Firm Size (FS). These variables are considered on the basis of numerous studies conducted earlier to look into the association between Working Capital Management and profitability of firms (Quayyum, 2011); (Marobhe, 2014); (Almazari, 2013); (Hailu & Venkateswarlu, 2016).

The meaningful relationship within numerous variables was identified through Pearson Correlation matrix, and with the purpose of multicollinearity identification, Durbin-Watson stat was conducted. The sample data of this research was balanced panel data, with the view that the nature of the data is cross sectional and time-series. On this basis, the results of Hausman test and Wald test, fixed effect method is selected to compare the random effects since Chi-square statics revealed vital ($p < 0.05$) in all the models. In order to compute the standard errors in all models, white cross section was used. Furthermore, Breusch-Pagan test results was significant (p value 0.0000) and proved that the sample data is free from Heteroscedasticity. In order to check the stationarity of data panel, the unit root test is applied and the test results revealed that net profit has no unit root (probability value of ADF 0.009 and PP 0.000 at individual intercept, which is less than 0.05), and in case of Return On Assets (probability value of ADF 0.014 and PP 0.004 at individual intercept, which is less than 0.05); hence stationary exists in dependent variables.

Lastly, the relationship between Working Capital Management and profitability of companies was found through two models as following,

**Model I:** The impact of Working Capital Management components on Net Profit of sample units.

$$NP_{i,t} = \beta_0 + \beta_1 CR_{i,t} + \beta_2 ITR_{i,t} + \beta_3 RCP_{i,t} + \beta_4 PDP_{i,t} + \beta_5 CCC_{i,t} + \beta_6 CCR_{i,t} + \beta_7 FDR_{i,t} + \beta_8 FS_{i,t} + \eta_i + \lambda_t + \varepsilon_{i,t}$$

**Model II:** The impact of Working Capital Management components on Return on Assets of sample units.

$$ROA_{i,t} = \beta0 + \beta1 CR_{i,t} + \beta2 ITR_{i,t} + \beta3 RCP_{i,t} + \beta4 PDP_{i,t} + \beta5 CCC_{i,t} + \beta6 CCR_{i,t} + \beta7 FDR_{i,t} + \beta8 FS_{i,t} + \eta_i + \lambda_t + \varepsilon_{i,t}$$

whereas profitability of companies was referred to NP and ROA, while $I$ stands for the $i^{th}$ firm, $t$ stands for year $t$, and other variables are defined as follows,

$\beta0$: Intercept coefficient

$\eta_i$: Individual firm effect assumed constant for firm $i$ over $t$

$\lambda_t$: Time specific effect assumed constant for given $t$ over $i$

$\varepsilon_{i,t}$: Time varying disturbance term serially uncorrelated with mean zero and variance 1. Random error term for firm $i$ at time $t$.

This study includes the following variables along with definitions that have been used to test the relationship between profitability and Working Capital Management.

**Hypotheses:**

**HP I:** Receivable Conversion Period has no purposeful impact on profitability of sample units.

**HP II:** There is a no consequential relationship between Payable Deferred Period and profitability of sample units.

**HP III:** Cash Conversion Cycle has no relevant impact on profitability of sample units.

**HP IV:** There is a no significant relationship over Inventory Holding Period and profitability of sample units.

**Data Analysis:**

**Descriptive Statistics:**

Table II reveals descriptive statistics of collected components from sample units. All Working Capital Management variables are collected from balance sheets and in addition, the measurements of profitability variables are being done from the income statements of steel companies. A total of 520 observations (40 x 13 = 520) are collected. The average credit period granted by steel companies to their clients was 55 days, while steel companies paid to their creditors on an average period of 56 days. In respect of inventory, the steel companies observed that it took 83 days on an average basis to convert into sale. Furthermore, the mean net profit and Return On Assets are at 2.01 % and 4.73 % respectively.

**Correlation Analysis:**

Table III provides Pearson correlation for the variables that were used in regression model. Pearson correlation reveals the relationship between Working Capital Management components and profitability of steel manufacturing companies in India. The study found the expressive relationship among net profit and

Working Capital Management components in all cases. The negative relationship between RCP and NP indicates that if the average collection increases, it would negatively impact the net profit of steel manufacturing companies in India and vice-versa. Moreover, same kind of relationship has been observed within PDP and NP. The relationship between ROA and Working Capital Management components are also informative. The study experienced negative relationship of ROA with RCP and PDP; this describes that, with the increase in average Receivable Collection Period, the ROA fall down. However, this is quite unusual in case of ROA and PDP, with the increase in Payable Deferred Period, the ROA has also declined and vice-versa. These results are backed by various studies such as the gross operating profit is highly opposite correlated with average debt receivable, cash conversion cycle (Hailu & Venkateswarlu, 2016).

**Regression Analysis:**

In this section, table IV presents the empirical findings on the relationship between Working Capital Management and profitability. The study used Panel Least Squares (Cross-section fixed) approach on 40 steel manufacturing companies. The results of model I indicate that out of seven working capital management components, only three components were significantly coefficient with net profit. The coefficient of Payable Deferred Period and cash conversion cycle was negative which means that any increase or decrease in average payable period significantly affects the profitability of firm. Moreover, the study results unveiled that the 1% increase in average payable deferred period, decreases the net profits by 66.8% and if the Cash Conversion Cycle increases by 1%, the net profit of steel manufacturing companies would fall by 71.8%. The same result have been found in literature as well (Raheman & Nasr, 2007), (Charitou, Elfani, & Lois, 2010), (Al-Debi'e, 2011), (Jayarathne, 2014, February). With the increased Cash Conversion Cycle, profitability is declined and ultimately there is a delay in cash inflow which means that by reducing the time lag between paying for the goods purchased and sales collection, the profitability of firms can be increased. At last, the study found the relationship between inventory holding period and net profit to be positive i.e., 1% increase in average holding period will increase the net profit by 88.3%.

Thus, based on the results of Model I, only one null hypothesis is accepted i.e., there is no significant relationship among receivable conversion periods and net profit of steel manufacturing companies in India. The null hypotheses of II, III and IV are rejected, since PDP, CCC and IHP have significant impact on the net profit of steel manufacturing companies in India. The overall R-squared is 0.889 proves that there is an immensely-exorbitant relationship found

throughout net profit and Working Capital Management elements and adjusted R-squared is 0.878 which means that more than 87% variance in dependent variable is due to independent variables.

In table V, ROA is a dependent variable and the independent variables are taken as in the first model. The tabulated results exhibits that most of the independent variables are not significantly associated with ROA; only Cash Conversion Cycle has significant impact on Return On Assets. Hence, the study accepts the null hypotheses I, II and IV. The relationship surrounded by Cash Conversion Ratio and Return On Assets described that, with the increasing Cash Conversion Ratio by 1%, the Return On Assets also increases by 278.3% which is quite unusual.

In the model II, the value of R-squared is less compared to model I which indicates that Working Capital Management variables are less correlated and regressed with Return On Assets unlike in case of net profit. The adjusted R-squared is 0.507, which indicates that 50% change in Return On Assets is because of independent variables. In both models, Durbin Watson test result is less than 4; hence there is no autocorrelation within variables.

**Conclusion:**

The Working Capital Management is one of the vital areas of management, and has a significant impact on the profitability of company. This research study enquired the relationship between Working Capital Management and profitability of steel manufacturing companies during the tenure, 2004-2016. From the findings, it was inferred that working capital variables have significant impact on both the dependent variables, namely Net Profit (NP) and Return on Assets (ROA). However, model I represents that more independent variables have significance related with net profit compared to model II, in which only one variable has significant impact on Return On Assets. The outcome of study is being supported by literature such as (Deloof, 2003), (Raheman & Nasr, 2007) who had found a strong intense negative relationship between the components of Working Capital Management including the number of days' accounts receivables, number of days' inventories and Cash Conversion Cycle with organisations profitability. So it is recommended that steel manufacturing companies should reduce their Cash Conversion Cycle keeping working capital components at an optimum level, since cash conversion has significant negative relationship with net profit. This can be done by shortening the receivable collection period and expediting the process of converting the inventory into sale.

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**Table 1: List of Variables**

| Measurement of Variables and abbreviation | | |
|---|---|---|
| **Dependent Variables** | **Measurement** | **Abbreviation** |
| Net profit | Sale - Cost of goods sold | NP |
| Return on Assets | Net Income - Total assets | ROA |
| **independent Variables** | **Measurement** | **Abbreviation** |
| Current Ratio | Current assets/Current liabilities | CR |
| Cash Conversion Cycle | Receivables' collection period + Inventory holding period – Payables' Deferral period | CCC |
| Cash Conversion Ratio | Cash and cash equivalents/Current liabilities | CCR |
| Inventory Turnover Ratio | Cost of goods sold/Average inventory | ITR |
| Inventory Holding Period | 365 Days/ Inventory turnover ratio | IHP |
| Receivable Collection Period | Trade receivables/sales*365 day | RCP |
| Payable Deferred Period | Trade payable/purchases*365 day | PDP |
| **Control Variables** | **Measurement** | **Abbreviation** |
| Firm Size | Natural logarithm of firm's sales, lagged one year | FS |
| Financial Debt Ratio | Short-term loans plus long-term loans divided by  Total Assets | FDR |

**Table II: Descriptive  Statistics of Independent, Dependent Variables (2004-2016)**

| Descriptive Statistics (N =520) | | | | | | |
|---|---|---|---|---|---|---|
| | **Mean** | **Max** | **Min** | **Std. Dev.** | **Jarque-Bera** | **Prob.** |
| **NP** | 2.01 | 73.51 | -1344.72 | 62.07 | 3973097 | 0.000 |
| **CR** | 1.95 | 26.02 | 0.01 | 2.56 | 25887.1 | 0.000 |
| **CCC** | 82.87 | 4159.25 | -154.44 | 252.92 | 804091.7 | 0.000 |
| **CCR** | 0.16 | 3.96 | 0.00 | 0.32 | 73171.39 | 0.000 |
| **ITR** | 6.73 | 68.94 | 0.00 | 4.83 | 71616.43 | 0.000 |
| **IHP** | 83 | 3318 | 0. | 192 | 1161829 | 0.000 |
| **RCP** | 55 | 1464 | 0 | 83 | 701019.3 | 0.000 |
| **PDP** | 56 | 459 | 0 | 59 | 3947.684 | 0.000 |
| **ROA** | 4.73 | 46.70 | -47.59 | 7.78 | 1124.359 | 0.000 |
| **FDR** | 1759.34 | 32326.21 | 0.00 | 4897.36 | 6112.649 | 0.000 |
| **FS** | 1.42 | 7.29 | 0.00 | 0.97 | 1574.549 | 0.000 |
| **N = Number of Observations** | | | | | | |

### Table III: Pearson  Bivariate Correlation Analysis

|  | NP | ROA | CR | ITR | IHP | RCP | PDP | CCC | CCR | FS | FDR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **NP** | 1 | .557** | .112* | 0.056 | -.701** | -.431** | -.119** | -.648** | .170** | 0.030 | 0.015 |
| **ROA** |  | 1 | .218** | .086* | -.168** | -.296** | -.209** | -.177** | .265** | .159** | -0.061 |
| **CR** |  |  | 1 | .103* | -0.009 | 0.007 | -.254** | 0.055 | .354** | .116** | -.118** |
| **ITR** |  |  |  | 1 | -.215** | -.099* | -.202** | -.149** | -0.006 | .419** | -.126** |
| **IHP** |  |  |  |  | 1 | .647** | .145** | .941** | -0.030 | -.177** | 0.069 |
| **RCP** |  |  |  |  |  | 1 | .111* | .798** | -0.046 | -.142** | -0.057 |
| **PDP** |  |  |  |  |  |  | 1 | -0.085 | -.149** | -.254** | .296** |
| **CCC** |  |  |  |  |  |  |  | 1 | -0.003 | -.123** | -0.035 |
| **CCR** |  |  |  |  |  |  |  |  | 1 | -0.061 | -0.013 |
| **FS** |  |  |  |  |  |  |  |  |  | 1 | -.303** |
| **FDR** |  |  |  |  |  |  |  |  |  |  | 1 |
| **Correlation is significant at the 0.01 level (2-tailed). | | | | | | | | | | | |
| *Correlation is significant at the 0.05 level (2-tailed). | | | | | | | | | | | |

### Table IV: Panel Data Regression Analysis

| Dependent Variable: Net Profit | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Method: Panel Least Squares (Cross-section fixed)** | | | | | | | | |
| **Variable** | **Model I** | **CR** | **ITR** | **RCP** | **PDP** | **IHP** | **CCC** | **CCR** |
|  | **Coefficient** | | | | | | | |
| Constant | 39.728* | -10.943 | -7.779 | 50.319* | -12.64 | -1.241 | 7.216 | -9.893 |
| CR | 0.286 | 0.962 |  |  |  |  |  |  |
| ITR | 0.816 |  | -0.332 |  |  |  |  |  |
| RCP | -0.200 |  |  | -0.698* |  |  |  |  |
| PDP | -0.668* |  |  |  | 0.053 |  |  |  |
| IHP | 0.883* |  |  |  |  | -0.058 |  |  |
| CCC | -0.718* |  |  |  |  |  | -0.107 |  |
| CCR | 2.525 |  |  |  |  |  |  | 6.527 |
| FDR | -0.001* | -0.001* | -0.001* | -0.001* | -0.001* | -0.001 | -0.001* | -0.001* |
| FS | -5.070* | 9.389 | 10.095 | -5.947* | 10.157 | 6.934 | 4.120 | 9.195 |
| R-squared | 0.889 | 0.147 | 0.147 | 0.761 | 0.148 | 0.170 | 0.287 | 0.148 |
| Adjusted R-squared | 0.878 | 0.072 | 0.072 | 0.740 | 0.073 | 0.097 | 0.224 | 0.072 |
| F-statistic | 79.267 | 1.969 | 1.969 | 36.216 | 1.974 | 2.330 | 4.578 | 1.970 |
| Durbin-Watson stat | 1.393 | 0.739 | 0.740 | 1.737 | 0.747 | 0.985 | 1.355 | 0.741 |

**Note:** $*\, p < .05$

### Table V: Panel Data Regression Analysis

| Dependent Variable: Return on Assets | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Method: Panel Least Squares (Cross-section fixed)** | | | | | | | | |
| **Variable** | **Model II** | **CR** | **ITR** | **RCP** | **PDP** | **IHP** | **CCC** | **CCR** |
|  | **Coefficient** | | | | | | | |
| Constant | 1.088 | 0.314 | 1.099 | 2.660* | -0.110 | 0.948 | 1.297 | 0.359 |
| CR | 0.131 | 0.232* |  |  |  |  |  |  |
| ITR | -0.038 |  | -0.865 |  |  |  |  |  |
| RCP | -0.007 |  |  | -0.022* |  |  |  |  |
| PDP | -0.009 |  |  |  | 0.013 |  |  |  |
| IHP | 0.028 |  |  |  |  | -0.001 |  |  |
| CCC | -0.022 |  |  |  |  |  | -0.003 |  |
| CCR | 2.783* |  |  |  |  |  |  | 3.055* |
| FDR | -0.000* | -0.000* | -0.000* | -0.000* | -0.000* | -0.000* | -0.000* | -0.000* |
| FS | 3.150* | 3.332* | 3.517* | 2.839* | 3.521* | 3.272* | 3.157* | 3.251* |
| R-squared | 0.552 | 0.489 | 0.488 | 0.525 | 0.490 | 0.487 | 0.495 | 0.498 |
| Adjusted R-squared | 0.507 | 0.444 | 0.443 | 0.484 | 0.446 | 0.442 | 0.451 | 0.454 |
| F-statistic | 12.123 | 10.894 | 10.852 | 12.602 | 10.952 | 10.808 | 11.168 | 11.283 |
| Durbin-Watson stat | 1.228 | 1.142 | 1.139 | 1.224 | 1.158 | 1.163 | 1.224 | 1.168 |

**Note:** $*\, p < .05$

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