

Impact of India's New Competition Policy on the Competitiveness of Indian Industry

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The deregulation of the industrial sector has accentuated competition both at the domestic and international levels. The ability of Indian industry to deliver prolifically would depend on its competitiveness though effective competition policy. The present paper is an attempt to measure the impact of India's new competition policy in augmenting the competitiveness of Indian industry. The results evince a marked improvement in industrial competitiveness due to new competition policy to a significant extent. More liberalization measures are essential for ensuring free and fair competition for the escalation of industrial competitiveness.

Field of Research: Industrial Economics.

1. Introduction

Globalisation and liberalization of the economies has drastically changed the nature of competition. Competition is a key driver of competitiveness that provides an incentive for firms to perform at their best, producing high-quality goods and services at the cheapest price. However, in the face of increased competition existing market players may be tempted to distort or impede competition in order to acquire and abuse market power. So, policy interventions are necessary in order to maintain and encourage healthy competition. In order to attain this purpose, many countries envisaged their competition policies with the objective to augment efficiency and competitiveness.

In India, the reform measures accelerated with the advent of New Economic Policies in 1991. India adopted the economic reforms in 1991 in order to create competitive environment for stimulating growth and competitiveness.

The sole objective of such liberalised policy measures was to enhance efficiency and competitiveness of the Indian industries by creating a competitive environment which is possible in free market economy through increased production; cost reduction and improvements in quality through better allocation of resources (Chadhuri, 2002 and Chadha, 2004).

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Against this background, the objective of this paper is to measure competitiveness of the Indian manufacturing industry during pre and post-reform periods and analyse the impact of India's new competition policy on the competitiveness of Indian industry. Besides introduction in Section 1, the rest of the paper is organised as follows. Section 2 present review of literature on conceptual framework of competition policy and industrial competitiveness. Section 3 dwells upon the database and methodology used for measuring impact of India's new competition policy on competitiveness of the Indian industry. In Section 4, results and discussions of the study have been discussed. Section 5 incorporates conclusion, limitations and scope for further research.

2. Review of Literature

Competition policy is increasingly being accorded a central place in a nation's economic policy framework. Competition policy refers to all measures through which governments seek to promote the efficient and competitive operation of markets (Ferguson and Ferguson, 1994; Kathuria, 1999).

Competition policy has a critical role in the restructuring of developing and transition economies for successful trade liberalisation and to realise the benefits of market oriented reforms. Competitiveness in industrial activities means developing relative efficiency along with sustainable growth. (Rao, 1993 and Basant and Morris, 2000).

Several studies in the international context show a positive relationship between competition policy and competitiveness. A study conducted for the Australian economy showed that the actual gains from implementation of competition policy are very significant as it promoted competition, economic growth, employment and government revenues (Mehta et al., 2003). The introduction of competition policy in South Africa and Zambia, not only complemented the existing development related policies, but also augmented the competitiveness of the firms (Lipimile, 2004).

Kirakpatrick; et al. (1985); Martin (1998) and Kambhampati (1996) view that large-scale enterprises in highly concentrated industries may exercise their market power in a way that has adverse efficiency and distributional consequences. Therefore, some form of flexible but effective competition policy is desirable, which can minimize the likelihood of adverse impact in particular cases without losing the benefits accruing from large-scale activity. Competition policy is guided by the belief that the domain of markets should be exploited as far as possible to perform allocative tasks with benefits expected in terms of allocative, productive and dynamic competition policy claims to protect consumers against monopolistic, collusive, predatory, restrictive and unfair business practices.

Amsden and Singh (1994) show that in Japan and Korea, competition policy has played vital role in promoting competition and competitiveness. The benefits of competition may be assessed on the basis of data relating to the effects of collusion or concentration and, conversely, the effects of competition policy enforcement or of deregulation upon productivity, prices, profit margins, the persistence of profits, the flexibility or adjustment speed of prices or profits, incentives for technological innovation, consumer and producer welfare, economic growth and competitiveness in international trade.

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Similarly, Singh (2002) and Lipimile (2004) show that competition policy facilitates market access and complements and reinforce policies that promote competition as competition fosters both static and dynamic efficiencies and international competitiveness of firms. Competition policy focuses on enterprise development in a dynamic market may stimulate economic growth and competitiveness of industry. Kahyarara (2004) studies the relationship between competition policy export performance and competition policy in Tanzania based on the manufacturing sector performance. The study finds that there is a positive relationship between competition policy and productivity, investment and export performance. An effective competition policy fostering a flexible, dynamic and competitive industrial sector leads a country to sustained development. Competitive market is one of the best ways to stimulate productivity. The World Bank studies reveal that economies with greater competition have higher levels of economic growth and enhanced productivity (Mehta and Evenett, 2006).

To the best of our knowledge, there is no study particularly in the Indian context so far which deals with the analysis of effectiveness of new competition policy of India in augmenting the competitiveness of the Indian industry. In the present study, our endeavour is to study the effectiveness of India's new competition policy in augmenting the competitiveness of the Indian industry and is expected to fill up some research gap in this context.

3. Database and Methodology

The present study spans over the period from 1975-76 to 2006-07. The study makes use of ASI data at the three-digit level for the registered industrial sector. The EPW research Foundation has also created a systematic electronic database using the results from the Annual Survey of Industries (ASI) for the periods 1973-74 to 2003-04, which has been extensively used in the present study. Data regarding exports, imports, FDI, number of patent applications, R&D and advertisement expenditure have been culled from RBI Bulletins and the publications of Department of Science and Technology including R&D Statistics and R&D in Industry, various issues of Economic Surveys, RBI publications and annual reports of Ministry of Company affairs.

All nominal figures have been deflated by using appropriate deflators by considering 1980-81 as base year. Net fixed capital stock as a measure of capital has been used and standard practice of perpetual inventory method has been followed to generate the series of gross fixed capital stock.

The present study broadly consists of two parts:-

- Measurement of Industrial Competitiveness; and
- Impact of India's New Competition Policy on Industrial Competitiveness.

The following variables, indices and technical coefficients have been used to measure the competitiveness of the Indian manufacturing industrial sector:-

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Total Factor Productivity (TFP) - indicates the weighted average combination of inputs to produce a certain level of output. In the present study, TFP is calculated with the help of Tornquist- Divisia index.

Index of Industrial Production (IIP) - represents the changes in the quantum of production in the industrial sector over a given period of time with reference to a base period.

Capital Deepening - Capital deepening ratio or capital intensity represents the relationship between capital and labour in a particular factor mix.

Gross Values Added (GVA) to Output – represents raw material intensity.

Gross Values Added (GVA) to Capital – indicate capital productivity.

Export Intensity- represents Export to sales ratio.

Profitability – reveals earning capacity.

Manufactured Exports to Total Exports- represents export competitiveness of manufactured goods.

R&D Intensity (Public Sector) - Represents R&D expenditure to sales ratio.

R&D Intensity (Private Sector).

Advertising Intensity (Public Sector)- indicates Advertising expenditure to sales ratio

Advertising Intensity (Private Sector).

Labour cost – proportion of labour cost in total cost of output.

Average Cost of Production - is an effective indicator of competitiveness as it shows the cost competitiveness of the manufacturing sector.

Skill Intensity- ratio of skilled man force to total employees.

After measuring the industrial competitiveness by using above variables, a Composite Competitiveness Index is formulated with the help of Principal Component Analysis (PCA). After the formulation of composite competitiveness index, multiple regression (step-wise) analysis is deployed by regressing independent chosen variables of competition policy on weighted combined competitiveness index as dependent variable.

The following variables as measure of competition policy have been used in the present study:-

Trade Openness – Free trade induces competition in the markets, which is the aim of the competition policy for the economic development. Trade openness has been measured as the ratio of total exports and imports to the GDP.

Investment Policy - An effective competition policy facilitates enhanced investment by providing appropriate legal and regulatory environment. The domestic investment performance has been measured as a ratio of GFCF (in registered manufacturing sector) to GDP. On the other hand, the FDI is taken as a ratio of FDI to GDP.

Product Dereservation Policy – Reservation of products for small scale industry (SSI) has led to poor quality of products and overall inefficiency. For the purpose of present study, the number of products reserved has been considered as a component of competition policy.

IPRs policy – has made significant efforts to enhance the industrial competitiveness in the era of competition by adopting appropriate strategies and measures for promoting R&D. The number of patents applications filed in India has been taken as a variable of competition policy.

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Industrial Deregulation Policy – In order to make Indian industry competitive, restraints on internal competition have been dismantled through various industrial policy reforms. These measures have been taken to encourage free and fair competition in order to promote efficiency and competitiveness of industrial sector. The number of industries under the licensing regime and the industries reserved for the public sector has been taken as measure of variable of competition policy.

Privatisation Policy – The government has disinvested shares of public sector undertakings in order to release resources and raise the level of ownership participation by the general public in these undertakings. (The ratio of disinvestment proceeds to capital employed of the public sector undertakings has been taken as a variable of competition policy.

Financial Sector Policy – One of the objectives of the financial reforms was to move towards market determined interest rates. The major aim of the reform process was to improve allocative efficiency in financial markets. In the present study, bank rate/repo rate, statutory liquidity ratio and minimum general rate of lending have been taken as a measure of competition policy.

Merger Policy – Introduction of deregulatory policy measures in general and competition policy in particular since 1991 have resulted in a significant increase in the number of mergers and acquisitions in Indian corporate sector. The total number of mergers in the Indian corporate sector as a measure of competition policy has been used in the present study.

Fiscal Policy – The basic aim of tariff reform was to enhance competitiveness of Indian industries. In the present study, peak tariff rate has been taken as a measure of competition policy.

Taxation policy – The taxation policy in India has evolved in response to the development strategy. The maximum corporate tax on the domestic companies has been considered as a variable of competition policy in the present study.

Exit policy – Firms which are not able to survive in a competitive market should be capable of closing down. Along with free entry, a necessary condition for efficiency is free exit. As the competitive business environment forces inefficient firms to close down, the average level of efficiency of various industries would improve.

The following geometric regression equation has been utilised to assess the effectiveness of competition policy in stimulating the competitiveness of Indian industrial manufacturing sector:-

$$Y_t = A \prod_{i=1}^k X_{it}^{\beta_i} e^{u_t}$$

$$\log_e Y_t = \log_e A + \sum_{i=1}^k \log_e X_{it} + U_t$$

Here, Y_t = Competitiveness Index (Dependent Variable);

X_{it} = Competition Policy Variables (Independent Variables);

A = Intercept;

k = Number of Variables (Independent);

t = Time;

β = Elasticity Parameters; and

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$U_t =$ White noise disturbance term.

As the above model is log linear in nature, the co-efficients of this explains respective elasticities given as:-

$$\gamma_i = \frac{\partial \log_e Y_t}{\partial \log_e X_{it}}$$

The independent variables as elaborated above are denoted in the present study as follows :-

- X1 = Trade Openness.
- X2 = Domestic Investment Policy.
- X3 = Product Dereservation Policy.
- X4 = IPRs policy.
- X5 = Industries under Licensing Requirements.
- X6 = Industries Reserved for Public Sector.
- X7 = FDI Policy.
- X8 = Cash Reserve Ratio.
- X9 = Disinvestment/Privatisation Policy.
- X10 = Bank Rate.
- X11 = Prime Lending Rate.
- X12 = Merger Policy.
- X13 = Fiscal Policy.
- X14 = Taxation Policy.
- X15 = Exit Policy.

4. Results and Discussions

Competitiveness of the Indian industry

Table 1 presents average annual growth rates of variables used for measuring the competitiveness of the Indian industry. The competitiveness of the Indian manufacturing sector in terms of TFP, industrial production and export intensity has shown significant improvement in the post reform period as compared to the pre reform period. On the other hand other variables which include efficiency; R&D and advertising intensities have shown declining trends in the post reform period.

Table 2 presents the Indian industrial competitiveness index. The index clearly indicates increase in competitiveness of the Indian manufacturing industry in the post reform period. The competitiveness index was 98.11 which surged to 156.89 in 1990-91 and it zoomed from 173.22 in 1991-92 to 375.37 in 2006-07. It indicates that the manufacturing sector responded significantly to industrial liberalisation. The overall annual growth rate of entire study period registered growth of 5.10 percent. After comparing the average annual growth rate during pre and post forms period, it is found that average annual growth rate during pre reform period was 3.40 percent and during post reform period it was 6.40 percent. It evidently indicates that industrial competitiveness of the Indian industry has improved significantly in the post reform period as compared to pre reform period.

After the formulation of composite competitiveness index, multiple regression (step-wise) analysis is deployed by regressing independent chosen variables of competition policy on weighted combined competitiveness index as dependent variable. The reliability of the model has been checked before using stepwise regression regarding multicollinearity i.e. the relationship among the independent variables. To test the extent of multicollinearity, variance inflation factor (Table-3), built by regressing each independent variable on all the others, is used in addition to correlation matrix (Appendix-1). A variance inflation factor (VIF) value of more than 10 suggests that multicollinearity exist. In order to solve the problem of multicollinearity stepwise regression has been used in the present study.

Table 4 presents result of multiple stepwise regression analysis. The analysis of effectiveness of India's new competition policy on the competitiveness of Indian industry divulges significant competition policy variables that have momentous impact on escalating the industrial competitiveness. It includes trade openness, investment policy, industrial policy, IPRs policy, tariff reforms and exit policy. Free trade induces competition in the markets, which is the aim of the competition policy for the economic development. The present study indicates that more trade openness would lead to decline in the competitiveness of the Indian industry as the proportion of imports is more than exports in the total trade. Tariff liberalisation in the industrial sector has resulted into rise in imports than exports. There is a need to focus on the efforts aiming at enhancing exports to attain international competitiveness. The investment policy in the present study indicates that increase in the investment both domestic and FDI would negatively affect the industrial competitiveness. The new economic reforms enhanced the investment level in the industry. But, the flip side of the investment boom without a corresponding increase in output growth is the increase in the levels of excess capacities and increase in incremental capital output ratio.

Another significant variable affecting industrial competitiveness is the industrial policy which shows that decrease in the number of industries reserved for public sector would lead to escalation of the competitiveness of the Indian industries. Similarly, reduction in peak tariff rate would further enhance the competitiveness. The new economic reforms aimed at increasing efficiency of the industrial sector advocates the closure of inefficient industrial units. The present study indicates that exit of inefficient industrial units would contribute towards augmentation of the Indian industry.

5. Conclusions

To conclude, competition policy has a significant impact on the augmentation of the competitiveness of the Indian industry as discussed above. Sound regulatory regimes increase competition, encourage efficiency and also enhance competitiveness. The regulatory framework should ensure fair competition, better access to markets and level playing field for domestic manufacturers. Government has a major role to play in providing the right market framework and regulatory environment as these provide invaluable impetus to the industrial competitiveness. Thus need is to adopt further liberalisation measures to enhance the competitiveness by promoting free and fair competition.

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Limitations of the Study

The major limitation of the study is the non availability of data regarding anti- competitive practices both at the national and international levels that having significant impact on industrial competitiveness of India.

Scope for Further Research

The study provides some relevant avenues for further research on this subject. One relevant area for further research could be to analyse the effectiveness of India's new competition policy in augmenting the competitiveness of specific industry which are important industrial sectors for the Indian economy like textile industry, pharmaceutical industry etc. Moreover, a comparative analysis with the other countries that have adopted competition policy can be also carried out in order to assess the effectiveness of India's competition policy in enhancing competitiveness of the industry.

Table 1: Average Annual Growth Rates of Indicators of Competitiveness of the Indian Industry during Various Periods (In Percent)

Variables	Pre-reforms period (1975-76 to 1990-91)	Post-reforms period (1991-92 to 2006-07)	Overall (1975-76 to 2006-07)
TFPI	2.89	4.00	3.48
IIP	5.97	6.67	6.34
Capital Deepening	12.26	10.34	11.25
GVA to Output	-0.12	-1.36	-0.77
GVA to Capital	-7.68	-5.43	-6.50
Export Intensity	4.92	6.92	5.92
Unit Cost of Production	9.70	7.60	8.60
Profitability	-6.62	-4.03	-5.27
<u>R&D Intensity</u>			
Public Sector	-2.83	-5.11	-4.03
Private Sector	-0.96	-0.16	-0.54
<u>Advertising Intensity</u>			
Public Sector	-1.24	3.99	1.50
Private Sector	1.02	7.68	4.50

Note: TFPI - Total Factor Productivity Index;
 IIP - Index of Industrial Production;
 R&D – Research and Development; and
 GVA - Gross Value Added.

Source: Computed from Table-1.

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**Table 2: Combined Competitiveness Index of Indian Industrial Sector
(1975-76 to 2006-07)**

Year	Competitiveness Index
1975-76	98.11
1976-77	109.62
1977-78	107.73
1978-79	110.87
1979-80	103.70
1980-81	100.00
1981-82	109.91
1982-83	97.92
1983-84	111.07
1984-85	110.22
1985-86	112.73
1986-87	115.94
1987-88	134.04
1988-89	143.55
1989-90	149.96
1990-91	156.89
1991-92	173.22
1992-93	187.73
1993-94	205.33
1994-95	216.80
1995-96	227.63
1996-97	257.37
1997-98	266.30
1998-99	302.02
1999-00	300.31
2000-01	311.04
2001-02	319.62
2002-03	354.28
2003-04	360.13
2004-05	334.72
2005-06	363.77
2006-07	375.37
Average Annual Growth Rate of Industrial Competitiveness	
Pre-reform Period (1975-76 to 1990-91)	3.40
Post-reform Period (1990-91 to 2006-07)	6.40
Entire Period (1975-76 to 2006-07)	5.10

Note: Author's Calculations.

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**Table 3: Collinearity of Independent Variables
(Variance Inflation Factor)**

Variables	Coefficient Variance	Uncentred VIF	Centred VIF
X1	6.15	529.16	65.77
X2	70.77	63.97	8.59
X3	0.00	28.30	2.34
X4	5.22	104.31	46.75
X5	0.12	74.20	30.82
X6	43.72	1592.30	363.84
X7	926.20	54.02	29.67
X8	6.26	135.80	18.58
X9	30.13	8.03	6.02
X10	29.37	626.23	21.62
X11	7.78	324.93	6.68
X12	0.03	153.86	68.59
X13	0.07	1083.83	396.70
X14	1.50	966.83	67.93
X15	0.00	11.87	7.48

Note: Author's Calculations.

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Table 4: Results of Multiple Step-Wise Regression

Steps→	1	2	3	4	5	6	7	8	9	10
Variables ↓										
Constant	6.044	6.045	6.184	6.187	6.371	6.436	6.21	6.149	5.885	5.757
X1	-0.38* (0.025)	-0.38* (0.020)	-0.37* (0.016)	-0.39* (0.013)	-0.37* (0.006)	-0.38* (0.005)	-0.37* (0.006)	-0.35* (0.005)	-0.37* (0.003)	-0.37* (0.004)
X2	-0.138 (0.078)	-0.138 (0.066)	-0.137 (0.059)	-0.131* (0.047)	-0.132* (0.041)	-0.131* (0.037)	-0.119* (0.044)	-0.108* (0.044)	-0.135* (0.005)	-0.133* (0.006)
X3	-0.022 (0.525)	-0.022 (0.511)	-0.023 (0.487)	-0.022 (0.493)	-0.02 (0.515)	-0.02 (0.488)	-	-	-	-
X4	0.151 (0.099)	0.151 (0.084)	0.147 (0.066)	0.142 (0.066)	0.132* (0.046)	0.134* (0.038)	0.152* (0.011)	0.151* (0.009)	0.177* (0.001)	0.208* (0.001)
X5	-0.124* (0.018)	-0.124* (0.013)	-0.121* (0.008)	-0.123* (0.005)	-0.129* (0.001)	-0.135* (0.001)	-0.131* (0.001)	-0.128* (0.001)	-0.133* (0.001)	-0.139* (0.001)
X6	-0.04 (0.766)	-0.04 (0.756)	-0.04 (0.755)	-0.04 (0.752)	-	-	-	-	-	-
X7	-0.019 (0.282)	-0.019 (0.250)	-0.019 (0.225)	-0.02 (0.191)	-0.02 (0.177)	-0.021 (0.149)	-0.02 (0.152)	-0.018 (0.172)	-0.02 (0.130)	-0.027* (0.033)
X8	0.002 (0.804)	0.002 (0.790)	0.018 (0.796)	-	-	-	-	-	-	-
X9	-0.012 (0.481)	-0.012 (0.492)	-0.012 (0.512)	-0.011 (0.486)	-0.01 (0.503)	-0.011 (0.457)	-0.007 (0.595)	-	-	-
Contd...										

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X10	-0.061 (0.693)	-0.062 (0.612)	-0.063 (0.593)	-0.04 (0.593)	-0.044 (0.534)	-0.057 (0.373)	-0.067 (0.279)	-0.063 (0.296)	-	-
X11	-0.00 (0.990)	-	-	-	-	-	-	-	-	-
X12	0.018 (0.663)	0.018 (0.634)	0.017 (0.635)	0.016 (0.646)	0.015 (0.659)	-	-	-	-	-
X13	-0.177 (0.104)	-0.177 (0.092)	-0.174 (0.082)	-0.172 (0.077)	-0.198* (0.003)	-0.198* (0.003)	-0.205* (0.003)	-0.202* (0.003)	-0.206* (0.003)	-0.218* (0.003)
X14	0.03 (0.887)	0.03 (0.883)	-	-	-	-	-	-	-	-
X15	0.043* (0.037)	0.043* (0.023)	0.043* (0.019)	0.044* (0.001)	0.045* (0.007)	0.047* (0.003)*	0.0518* (0.003)	0.0521* (0.003)	0.0505* (0.003)	0.0626* (0.003)
X16	0.0107 (0.233)	0.0107 (0.200)	0.0106 (0.189)	0.0109 (0.157)	0.0106 (0.155)	0.0103 (0.156)	0.006 (0.161)	0.0062 (0.174)	0.0061 (0.177)	-
R ²	99.49	99.49	99.49	99.48	99.48	99.48	99.46	99.45	99.43	99.38
\bar{R}^2	98.94	99	99.06	99.11	99.15	99.19	99.21	99.23	99.23	99.2

Notes: i) Figures in parenthesis are p values. ii) * signify that coefficient is significant at 5 percent level of significance.
Source: Author's Calculations.

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Appendix 1

Correlation coefficients of independent variables

Variables	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15
X1	1.000000 ---- ----														
X2	-0.045722 -0.250692 0.8038	1.000000 ---- ----													
X3	-0.481633 -3.010148 0.0053	0.161389 0.895705 0.3775	1.000000 ---- ----												
X4	-0.772862 -6.670827 0.0000	- - 0.9813	0.151282 - 0.4085												
X5	-0.736382 -5.961473 0.0000	- - 0.5424	0.206653 1.156860 0.2565		1.0000 -----										
X6	-0.892891 -10.86132 0.0000	- - 0.0917	0.321881 1.862115 0.0724		0.7027 5.4103	1.00000 -----									
X7	0.950230 16.70565	- - -	- - -		-0.717614 -5.643747	- -	- -	1.000000 -----							

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	0.0000	0.8874	0.0011	0.0000	0.0000	0.0000	----						
X8	0.941811	-	-	-0.700096	-	-	0.930937	1.000000					
	15.34612	-	-	-5.370195			13.96283	----					
	0.0000	0.2125	0.0025	0.0000	0.0000	0.0000	0.0000	----					
X9	-0.736543	-	0.139129	0.786023	0.4897	0.77123	-	-	1.000000				
	-5.964316	-	0.769527	3.0764	6.63606	-	-		----				
	0.0000	0.0461	0.4476	0.0000	0.0044	0.0000	0.0000	0.0002	----				
X10	-0.869369	-	0.321166	0.7098	0.87798	-	-	0.904648	1.000000				
	-9.635953	-	1.857505	5.5206	10.0460	-	-	11.62703	----				
	0.0000	0.0542	0.0731	0.0000	0.0000	0.0000	0.0000	0.0000	----				
X11	0.043119	0.858811	0.166832	-	-	-	0.037086	-	-0.348981	-0.357646	1.0000		
	0.236394	9.182059	0.926767	-	-	-	0.203269	-	-2.039685	-2.097655	----		
	0.8147	0.0000	0.3614	0.2504	0.0717	0.8403	0.4104	0.0503	0.0445	----			
X12	-0.028157	0.525092	0.134189	-	0.0119	-	0.004069	-	-0.377096	-0.260569	0.3305	1.000000	
	-0.154286	3.379425	0.741693	-	0.0652	-	0.022286	-	-2.230077	-1.478262	1.9183	----	
	0.8784	0.0020	0.4640	0.4010	0.9484	0.5228	0.9824	0.7306	0.0334	0.1498	0.0646	----	
X13	0.952854	-	-	-	-	-	0.997134	0.930607	-0.673306	-0.816808	0.010395	1.000000	
	17.20005	-	-	-	-	-	72.19482	13.92583	-4.987872	-7.754854	0.1557	0.056940	----
	0.0000	0.8657	0.0018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8773	0.9550	----
X14	-0.859819	-	0.264456	0.6384	0.85702	-	-	0.950506	0.952865	-0.266205	-	-	1.00000
	-9.223344	-	1.501959	4.5437	9.11009	-	-	16.75588	17.20217	-	-1.512646	-	----

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	0.0000	0.1418	0.1436	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1206	0.1408	0.0000	----
			-	-	-	-					0.7969			-	
X15	0.316447	0.808926	-	-	-	-	0.292971	0.164391	-0.556967	-0.669214		0.402917	0.271095	-	1.000000
			-	-	-	-					7.2274			-	
	1.827150	7.536289					1.678308	0.912824	-3.673097	-4.932826		2.411250	1.542613		----
	0.0776	0.0000	0.5851	0.1619	0.0054	0.0016	0.1037	0.3686	0.0009	0.0000	0.0000	0.0222	0.1334	0.0018	----