


**THE ROLE OF CUSTOMER SATISFACTION IN IMPROVING THE PERFORMANCE OF SAIL (STEEL AUTHORITY OF INDIA LTD)**

Roshan Baa<sup>A</sup>, A. K. Chatteraj<sup>B</sup>



ARTICLE INFO	ABSTRACT
<p><b>Article history:</b></p> <p>Received 01 May 2023</p> <p>Accepted 28 July 2023</p>	<p><b>Purpose:</b> The study focussed on the influence of customer satisfaction on reform policies and the performance of SAIL and attempts to investigate the influence of reform policies in improving the performance of SAIL (De, 2014).</p> <p><b>Theoretical Framework:</b> Research examined the moderating role of customer satisfaction between reform policies and the performance of SAIL. A conceptual model with two hypotheses was developed and data were collected from 385 employees and managerial staff in the form of a questionnaire from five integrated units of SAIL (Jain et al., 2014).</p> <p><b>Design/Methodology/Approach:</b> Paper goes through the quantitative and qualitative discussion to analyse the performance of SAIL against the backdrop of liberalization measures introduced in the 1990s and afterward. The study will analyse two different periods of SAIL: Before 1990 and after 1990.</p> <p><b>Findings:</b> The findings of the study provide useful insights to evaluate and improve SAIL's reform policies and performance and to enhance customer satisfaction.</p> <p><b>Conclusion:</b> Article paves the way to huge scope for future researchers. The scope of the study can be further broadened by including several PSEs across multiple industries to gain comprehensive findings about the impact of reforms on the performance of different types of PSEs.</p>
<p><b>Keywords:</b></p> <p>Customer Satisfaction; Business Performance; Public Sector Enterprises; Disinvestment; Evaluation.</p> <div data-bbox="172 981 480 1227">  </div>	<p>Doi: <a href="https://doi.org/10.26668/businessreview/2023.v8i8.3368">https://doi.org/10.26668/businessreview/2023.v8i8.3368</a></p>

**O PAPEL DA SATISFAÇÃO DO CLIENTE NA MELHORIA DO DESEMPENHO DA VELA (STEEL AUTHORITY OF INDIA LTD)**

**RESUMO**

**Objetivo:** O estudo centrou-se na influência da satisfação do cliente nas políticas de reforma e no desempenho da SAIL e nas tentativas de investigar a influência das políticas de reforma na melhoria do desempenho da SAIL (De, 2014).

**Estrutura Teórica:** A pesquisa examinou o papel moderador da satisfação do cliente entre as políticas de reforma e o desempenho da SAIL. Um modelo conceitual com duas hipóteses foi desenvolvido e foram coletados dados de 385 funcionários e gerentes na forma de questionário de cinco unidades integradas da SAIL (Jain et al., 2014).

**Design/Methodologia/Abordagem:** O artigo passa pela discussão quantitativa e qualitativa para analisar o desempenho da SAIL no contexto das medidas de liberalização introduzidas na década de 1990 e posteriores. O estudo analisará dois períodos diferentes do SAIL: antes de 1990 e depois de 1990.

**Conclusões:** As conclusões do estudo fornecem informações úteis para avaliar e melhorar as políticas e o desempenho da SAIL e para aumentar a satisfação do cliente.

<sup>A</sup> Assistant Professor. Department of Commerce. St. Xavier's College. Ranchi, India.

E-mail: [roshansjranchi@gmail.com](mailto:roshansjranchi@gmail.com) Orcid: <https://orcid.org/0000-0002-6582-4372>

<sup>B</sup> Associate Professor. University Dept. of Commerce and Business Management, Ranchi University, Former Acting Chairman JPSE. Ranchi, India. E-mail: [drajaykrchatteraj@gmail.com](mailto:drajaykrchatteraj@gmail.com)

Orcid: <https://orcid.org/0000-0003-2576-945X>

**Conclusão:** O artigo abre caminho para um enorme escopo para futuros pesquisadores. O escopo do estudo pode ser ampliado com a inclusão de vários PSEs em vários setores para obter resultados abrangentes sobre o impacto das reformas no desempenho de diferentes tipos de PSEs.

**Palavras-chave:** Satisfação do Cliente, Desempenho de Negócios, Empresas do Setor Público, Desinvestimento, Avaliação.

## EL PAPEL DE LA SATISFACCIÓN DEL CLIENTE EN LA MEJORA DEL RENDIMIENTO DE LA VELA (STEEL AUTHORITY OF INDIA LTD)

### RESUMEN

**Propósito:** El estudio se centró en la influencia de la satisfacción del cliente en las políticas de reforma y el rendimiento de SAIL e intenta investigar la influencia de las políticas de reforma en la mejora del rendimiento de SAIL (De, 2014).

**Marco teórico:** La investigación examinó el papel moderador de la satisfacción del cliente entre las políticas de reforma y el desempeño de SAIL. Se desarrolló un modelo conceptual con dos hipótesis y se recolectaron datos de 385 empleados y directivos en forma de cuestionario de cinco unidades integradas de SAIL (Jain et al., 2014).

**Diseño/ Metodología/ Enfoque:** El artículo pasa por la discusión cuantitativa y cualitativa para analizar el desempeño de SAIL en el contexto de las medidas de liberalización introducidas en la década de 1990 y después. El estudio analizará dos períodos diferentes de SAIL: antes de 1990 y después de 1990.

**Resultados:** Los resultados del estudio proporcionan información útil para evaluar y mejorar las políticas de reforma y el rendimiento de SAIL y para mejorar la satisfacción del cliente.

**Conclusión:** El artículo allana el camino para un gran alcance para futuros investigadores. El alcance del estudio se puede ampliar aún más al incluir varios PSE en múltiples industrias para obtener hallazgos completos sobre el impacto de las reformas en el desempeño de diferentes tipos de PSE.

**Palabras clave:** Satisfacción del Cliente, Desempeño Empresarial, Empresas del Sector Público, Desinversión, Evaluación.

### INTRODUCTION

During the early years of independence, the government of India was facing the problem of income and regional inequality along with the low level of employment and lack of skilled manpower. Furthermore, the lack of an industrial basis, service sector, low savings and weak infrastructure discouraged private investment (Kim & Panchanatham, 2021). Given the situation, the government chose to present a clear long-term development strategy. As a result, the government pursued a plan-led development strategy in which the public sector played a key role. The goal of the plan-led development strategy was to ensure the optimal use of limited economic resources while also achieving the social goal (De, 2014). This led to the development of Public Sector Enterprises (PSE). PSEs are organisations or companies which provide marketable products and services and are either owned by the government or have government undertakings or are whole/partly owned and controlled by the government. The basic goal of PSEs is to provide reasonable goods and services to the public. Furthermore, to improve the performance and output of the PSEs, the government of India has taken a number of reform measures. These reforms were introduced to target the high opportunity cost of

economic resources which has been locked up in public enterprises (Jain et al., 2014). Several factors were also found to influence the performance of PSE. These include efficiency of service delivery, quality of work, productivity and customer satisfaction. Customer satisfaction is seen as a key performance indicator because it helps in achieving high market shares which results in advantageous corporate outcomes (Agarwal & Gupta, 2013). Steel Authority of India Limited (SAIL) is a public enterprise steel manufacturing company operated and owned by the Government of India. With an annual turnover of INR 68,452 Crore (US\$9.32 billion) for the fiscal year 2020–21 it is one of the most significant PSE of the Indian government. Incorporated on 24 January 1973, SAIL has 71,297 employees (as of 01-Aug-2019). With an annual production of 14.38 million metric tons, SAIL is the 20th largest steel producer in the world and the 3rd largest in India. The Hot Metal production capacity of the company will further increase and is expected to reach a level of 50 million tons per annum by 2025. SAIL operates and owns 5 integrated steel plants at Bhilai, Rourkela, Durgapur, Bokaro and Burnpur (Asansol) and 3 special steel plants at Salem, Durgapur and Bhadravathi (*“Steel Authority of India” 2020*). Some of the studies highlighted the satisfactory performance and financial status of SAIL, whereas some studies claimed that SAIL’s performance was on a decline (Sharma, 2015; Sinku, 2014). Therefore, further studies are required to remove such discrepancies and to evaluate the performance of SAIL. A dearth of primary data was also found to assess SAIL’s performance and its impact, resulting in limited studies. Therefore, the present study focuses on the impact of liberalization on the performance of PSUs, with special reference to SAIL. Further, the role of customer satisfaction needs to be studied for its suitability in evaluating its influence on the overall performance of SAIL.

## LITERATURE REVIEW

### Reform Policies

The industrial reforms undertaken by the government affect the assembly, ownership and performance of an industry. Industrial reforms and policies are significant for economic upliftment and for the development of employment opportunities. A rise in economic status allows for industrial growth and vice-versa. Such enhancements are reflected in infrastructure development, transport, education, financial institutions, banking, etc. National issues, such as unemployment, poverty, no health facilities, etc. can be solved through suitable industrialization policies in developing countries. Industrial development affects the progress of a developing or underdeveloped country through refined policies. The main features

highlighting the importance of industrial reforms include effective growth of primary sector industries, progress in trade and commerce, reduction in poverty, improvement in living conditions, growth in the defence sector, and enhanced foreign trade and exchange. The industrial policy in India covers several aspects, such as payment of subsidies and financial regulations are included under industrial reforms, which encompass principles, procedures, rules, policies, incentives and punishments, and labour and tariff policies, for the concerned industries (*Industrial policy in India, 2022*). The main objectives of these reforms can be summarized as follows: to maintain a sustained growth in productivity; to enhance gainful employment; to achieve optimal utilisation of human resources; to attain international competitiveness; and to transform India into a major partner and player in the global arena. Post-independence, four reforms have been introduced by the Indian government, these include the industrial policy revolution of 1948, the industrial policy statement of 1956, 1977 and the new industrial policy during economic reforms 1991. The opening up of the economy in 1991 also saw labour market reforms such as divestment from public-sector enterprises (PSEs) and privatisation of public-sector businesses, wage increase (*Wage Policies for Decent Work and Inclusive Growth India Wage Report, 2018*) and reduction and rationalisation of customs and excise levies, as well as personal and corporate income taxes (**Mishra, 1985**). The current literature has pointed out that an increase in profitability is observed pre- and post-disinvestment (**Gupta & Srivastava, 2016; Jain et al., 2014; Mandiratta & Bhalla, 2017**). Additionally, privatisation and foreign direct investment (FDI) have both been seen as critical components of India's reform programme by policymakers, international organisations, and the private sector in India and overseas (**Mohan, 2003**). Therefore, we have chosen to study four reform policies: disinvestment, privatisation, tax reforms and FDI.

### **Organisational Performance**

The performance of any PSU could be gauged by assessing the management of its overall activities (**Patidar & Movalia, 2016**). Based on the profit margins, level of autonomy, and flexibility, PSUs in India were divided into three categories, namely, Maharatnas, Navratnas, and Miniratnas (**Batth et al., 2018; Neshat Anjum, 2020**). The categorization primarily aimed to enable PSUs to compete with private sector organizations (**Varottil, 2020**). Periodic examination of the performances of the PSEs along with evaluation of their profit margins is crucial to assess their overall efficiency. Currently, most of the PSEs (171) operating in India are operating with a profit margin of approximately Rs. 1,38, 112 crores. Whereas, the

remaining 84 PSEs are encountering financial loss amounting to Rs. 44,817 crores. These statistics have been put forward by the 60th Annual public enterprises survey 2019-2020 by the Ministry of Finance (2021) (Department of Public Enterprises, 2021). The focus of our study is on SAIL, a PSE in India. The financial performance of SAIL in terms of current ratio (CR), liquidity ratio (LR), debt-equity ratio (DTR) and working capital turnover during the periods of 2004-2005 and 2015-2016 had a higher value in the post-Maharatna period when compared to the pre-Maharatna period (**Anjum, 2020**). Moreover, the Performance Appraisal System (PAS) consisting of communication, work assessment, productivity and employee competence were effective factors for the performance of SAIL (**Deepa, 2019**). Profitability and working capital management were also significant features used to assess organizational efficiency and performance. SAIL's components of corporate profitability and working capital management had a robust relationship; CR, LR, DTR and Inventory Turnover Ratio (ITR) positively correlated to profitability ratio, while a negative correlation was found between working capital turnover ratio and profitability ratio (**Sharma, 2015**). A study by Gupta & Srivastava (2016) compared the profitability of Indian Oil and Gas companies pre- and post-disinvestment. The post-disinvestment ratio analysis revealed that the Oil and Natural corporation's operating performance, shareholder wealth, and efficiency had improved. However, the Indian Oil Corporation Limited ratio analysis revealed that the post-disinvestment analysis has little influence, and all ratios tend to decrease. Another study by (**Mandiratta & Bhalla, 2017**) studied the pre- versus post-privatisation comparisons and panel data estimation techniques on Central Public Sector Enterprises (CPSEs). Researchers discovered a significant increase in sales efficiency and net income efficiency but insignificant results in profitability position. On the contrary, a recent study by the same authors (**Mandiratta & Bhalla, 2021**) showed disinvestment led to a decline in profitability, suggesting disinvestment could lead to a decrease in profitability over the years. The empirical evidence supports the positive effects of privatization on PSEs' performance and privatized units have significantly improved the level of profitability, sales, operational efficiency, earnings per share and dividend payments after disinvestment (**Ravinder & Rupinder, 2007**).

### **Customer Satisfaction**

Customers are the key stakeholders in organisations, and their satisfaction is a priority. Satisfaction is a multidimensional term that has been conceptualised as a necessity for relationship building and is commonly defined as the complete fulfilment of one's expectations.

It is a customer's feeling or attitude towards a product or service after it has been used (**Agarwal & Gupta, 2013**). In highly competitive corporate environments, providing exceptional service to attract and retain customers has become imperative for survival. Organisations that provide exceptional service quality see a significant gain in market share and revenues (**Koirala & Shrestha, 2012**). Boosting customer satisfaction and loyalty leads to increased income and profit (**Mogharabi et al., 2014**). (**Suchánek et al., 2014**) discuss the important elements that influence customer satisfaction and can be utilised to assess customer satisfaction. These criteria are product (in terms of quality, availability, and so on); price (easy payment conditions, among others); services; distribution; and product image. In circumstances where product quality is used to determine customer happiness, and that satisfaction impacts quality at the same time, a situation emerges in which that specific aspect both affects and is influenced by quality. This problem does not develop when there is a dynamic perception of customer happiness and quality; it only occurs when customer satisfaction and quality are viewed as a process. Additionally, customer happiness is affected by quality (both perceived and technical), and businesses respond by inventing products to boost customer satisfaction. A study by (**McKinsey, 2019**) showed that majority of the government organisation underperforms in terms of customer satisfaction. This is due to a monopolistic mindset, lack of innovation and lack of data on customer experience. Governments also frequently lack the competencies required to analyse and address customer experience gaps. Deep analytics as well as human-centred design abilities are frequently in limited supply. (**Gilbert et al., 1999**) measured the public sector customer service satisfaction on three different types of customers and found that government organisations provided excellent services for direct buyers, whereas showed a decline in delivering services to clients and captives. A customer satisfaction survey conducted by *Bharat electronics limited* (2014) on six goods from various units showed an overall satisfaction of 81.33%. (**Jubin, 2021**) conducted a survey on customer satisfaction among BSNL users. The findings revealed that the majority of the customers rated their service as fair because of problems associated with mobile connectivity. Moreover, the majority of customers did not prefer using BSNL for business purposes.

### **Theoretical Framework and Hypothesis Development**

From the literature review it is clear that the influence of customer satisfaction on reform policies and performance must be verified. In this study, a conceptual model is proposed, and



hypotheses are framed based on the theoretical framework linking customer satisfaction, reform policies and performance. (Figure -1)

Figure -1 Conceptual model



Source: Prepared by Authors (2023)

### Relationship between Reform Policies and Performance

Studies have shown that reform policies significantly affect the overall performance and efficiency of PSUs. For instance, studies, such as (Huang & Boateng, 2013), (Jayachitra & Venkatraman, 2015), (Jones et al., 2007) and (Singh & Paliwal, 2010), highlighted that private ownership is not suitable when compared to state ownership. In contrast, other studies have claimed that state ownership does not provide the necessary platform for effective results, which are evident in private ownership. In India, tax reforms play a major role in the performance of companies. Implementation of taxes, such as Value Added Tax (VAT) and Goods and Service Tax (GST), has affected the companies' turnover directly or indirectly. For instance, (Gakhar, 2019) stated that inclusion of GST improved the performance of various sectors including cement, steel, automobile and communication. Studies have asserted that foreign investments are crucial to understand the performance of different companies (Raju, 2012; Ramaswamy & Li, 2001). The following hypothesis is proposed:

*H<sub>1</sub>: There is positive impact of reform policies on the overall performance of SAIL*

### Influence of Customer Satisfaction on Reform Policies and Performance of SAIL

Consumer satisfaction is defined as the measurement of a company's products and services that fulfil the consumers' requirements (Ahmed & Amir, 2011). According to Matzler and Hinterhuber (1998), performance of a company is directly affected by consumer satisfaction. Factors, such as productivity and ROI, are improved with an increase in consumer approval (Anderson et al., 1997). In addition, customer satisfaction leads to improvement in

allegiance, which enhances a company's financial status (**Lombart & Louis, 2012**). Customers who are satisfied with the usage of a particular product or service are motivated to buy on a regular basis and in substantial quantities. This evidently results in higher profits and increased brand loyalty. The capability of a company to meet its consumers' requirements and preserve brand image positively is associated with its competitive edge (**Gupta, 2002**). The following hypothesis is proposed:

***H2: Customer satisfaction significantly mediates the relationship between reform policies on performance of SAIL***

## **METHODOLOGY**

### **Participants**

This study aims to analyse the performance of SAIL against the backdrop of liberalization measures introduced in the 1990s and afterward. The study will analyse two different periods of SAIL: Before 1990 and after 1990. The post-reform period will be divided into two sub-periods: pre-Maharatna status and post-Maharatna status. The current study is associated with facts and reality gathered through observation and measurement; positivism was used as the research philosophy along with a deductive method. The assumptions will be affirmed by confirming the concepts and hypotheses of this study using the data provided by the respondents. Further, the outcomes will be used to extrapolate to a bigger population. The study follows a quantitative approach to test the hypothesis empirically. The convenient sampling method was chosen to determine the sample size. Data was collected from 385 employees and managerial staffs in the form of questionnaire from the five integrated unit of SAIL. The target respondents were approached and specified with objectives of the study and the survey shared either in person or online. The questionnaire comprised of two sections: The first section included demographics details (age, gender, education and position). This was followed by reform policies and performance of SAIL. The sub-factors measuring these factors were derived by conducting EFA. Reform policies contained questions regarding disinvestment, privatisation, tax reforms and FDI. Likewise, performance of SAIL included questions about 3 factors influencing profitability: return on sale, return on assets, and return on quality. The form of scale to be assigned to the research variables was cautiously taken into account. A five-point Likert scale was used for measuring the research constructs, ranging from strongly agree to strongly disagree. Prior to collecting the data, a pilot analysis was done to assess the reliability and validity of the instruments included in the survey. For this purpose, 50



managers and non-managers from SAIL, India was chosen as the sample size. Based on their responses, the items in the questionnaire were revised and the final survey was structured accordingly

### Data analysis

The collected primary data was analysed using statistical software SPSS version 24.0. Frequency analysis expressed as percentages was used for demographic variables. Reliability and validity testing was carried out to check whether the scales used in the questionnaire are reliable using Cronbach's alpha. Independent t test was used to compare the means between two non-related groups on the same continuous dependent variable. Confirmatory factor analysis (CFA) was used to check the reliability and validity of the measurement model. Structural Equation Modelling (SEM) was used to examine the relationships between the measured constructs and the latent constructs of the structural model.

## RESULTS

### Demographics of the Participants

Totally, 385 respondents participated in this study with a majority of them were males (93.8%), under or equal to the age of 40 (57.6%) and had Bachelor's degree (Table-1). Furthermore, 70.8% were either managers or assistants whereas the rest 29.2% were technicians.

Table-1 Demographics

Demographic factor	Category	Frequency (Percent)
Gender	Male	376 (93.8)
	Female	25 (6.2)
Age	21 – 30	72 (18.0)
	31 – 40	231 (57.6)
	41 – 50	90 (22.4)
	51 – 60	8 (2.0)
Education	Bachelor's degree	268 (66.8)
	Master's degree	133 (33.2)
Position	Operator cum technician	117 (29.2)
	Manager + Assistant	284 (70.8)

Source: Prepared by Authors (2023)

### Impact of Reform Policies on Improving the Performance of SAIL

From the multivariate test of MANOVA (Table-2), it was observed that all four sub factors, disinvestment ( $F = 4.585$ ), privatization ( $F = 6.480$ ), tax reforms ( $F = 5.568$ ) and FDI t ( $F = 4.411$ ) exerted a significant impact on performance ( $p < 0.05$ ). Differences in Wilks'

Lambda value indicates variation in disinvestment, privatization, tax reforms and FDI respectively (Appendix 1). The test of subject effects for the impact of reform policies on the overall performance (Table 4.4) shows that disinvestment had significant impact on return on sales ( $F = 10.913$ ), return on assets ( $F = 6.027$ ) and return on equity ( $F = 6.377$ ). Privatization had significant impact on return on assets ( $F = 17.356$ ), but not on return on sale ( $F = 4.026$ ) and return on equity ( $F = 0.147$ ). Tax reforms had significant impact on return on sale ( $F = 3.391$ ) and return on equity ( $F = 6.473$ ) but not on return on assets ( $F = 2.871$ ). FDI had significant impact on return on sales ( $F = 12.481$   $p < 0.01$ ) but not on return on assets ( $F = 0.616$ ) and return on equity ( $F = 2.111$ ). Additionally, the total variation in reform policies accounted for 30.4% in return on sale, 18.7% in return on assets and 14.6% in return on equity. Thus, the hypothesis,

***H<sub>1</sub>: There is positive impact of reform policies on the overall performance of SAIL is accepted.***

Table-2 Tests of Between-Subjects Effects for impact of reform policies on the sub-variables of performance

Reform policies	Performance	Type III Sum of Squares	df	Mean Square	F	Sig.
Disinvestment	Return on sales	2.555	1	2.555	10.913	0.001
	Return on assets	1.994	1	1.994	6.027	0.015
	Return on equity	2.450	1	2.450	6.377	0.012
Privatization	Return on sale	0.943	1	0.943	4.026	0.045
	Return on assets	5.743	1	5.743	17.356	0.000
	Return on equity	0.811	1	0.811	2.111	0.147
Tax reforms	Return on sale	3.391	1	3.391	14.481	0.000
	Return on assets	0.950	1	0.950	2.871	0.091
	Return on equity	2.487	1	2.487	6.473	0.011
Foreign direct investment (FDI)	Return on sale	2.923	1	2.923	12.481	0.000
	Return on assets	0.204	1	0.204	0.616	0.433
	Return on equity	0.811	1	0.811	2.111	0.147

a. R Squared = .304 (Adjusted R Squared = .297)

b. R Squared = .187 (Adjusted R Squared = .179)

c. R Squared = .146 (Adjusted R Squared = .137)

Source: Prepared by Authors (2023)

## Impact of Reform Policies on Performance through Customer Satisfaction

### Assessment of reliability

The reliability of the measurement model was confirmed by Cronbach's alpha, composite reliability (CR), rho\_A and AVE (Table-3). The findings exhibited that the items were internally consistent under each factor. The Fornell-Larcker Criterion and HTMT ratio

(Appendix 2 & 3) were used to assess discriminant validity. Both the tests found that the participants perceived the factors of reform policies and performance distinctly

Table-3 Construct Reliability and Validity

Factors	Loadings	Indicator reliability	Cronbach's Alpha	rho_A	Composite Reliability	AVE
<b>Reform Policies</b>						
<b>Disinvestment</b>			0.747	0.776	0.807	0.583
RP_D_1	0.748	0.560				
RP_D_3	0.702	0.492				
RP_D_5	0.834	0.696				
<b>FDI</b>			0.762	0.768	0.849	0.584
RP_F_1	0.766	0.586				
RP_F_3	0.706	0.499				
RP_F_4	0.775	0.601				
RP_F_5	0.806	0.650				
<b>Privatization</b>			0.756	0.761	0.845	0.577
RP_P_1	0.762	0.581				
RP_P_3	0.701	0.491				
RP_P_5	0.776	0.602				
RP_P_6	0.797	0.635				
<b>Tax reforms</b>			0.761	0.764	0.773	0.533
RP_T_4	0.779	0.607				
RP_T_5	0.730	0.533				
RP_T_6	0.678	0.459				
<b>Customer satisfaction</b>			0.718	0.728	0.826	0.544
CS_1	0.809	0.655				
CS_2	0.699	0.489				
CS_3	0.659	0.434				
CS_5	0.774	0.599				
<b>Performance</b>						
<b>ROA</b>			0.720	0.732	0.797	0.569
P_RA_1	0.789	0.622				
P_RA_2	0.670	0.449				
P_RA_3	0.797	0.636				
<b>ROE</b>			0.711	0.716	0.837	0.719
P_RE_3	0.830	0.688				
P_RE_4	0.866	0.750				
<b>ROS</b>			0.742	0.775	0.805	0.580
P_RS_1	0.835	0.698				
P_RS_3	0.774	0.599				
P_RS_4	0.667	0.445				

Source: Prepared by Authors (2023)

### Evaluation of model fitness

The estimation of standardized root mean square residual (SRMR) was used to assess the model fitness. The findings demonstrated that the model had the SRMR value of 0.060, which is adequate to reflect the optimal fitness of the model. The NFI values above 0.90 imply that the model is of good fit (Table-4)

Table-4: Model fit summary

	<b>Saturated Model</b>	<b>Estimated Model</b>
SRMR	0.060	0.0731
d_ ULS	0.892	0.983
d_ G	0.545	0.468
Chi-Square	1586.325	1695.326
NFI	0.916	0.915

Source: Prepared by Authors (2023)

The predictive relevance of the model was also estimated using Stone–Geisser’s Q<sup>2</sup> value. The findings (Table-5) demonstrated that Q<sup>2</sup> values of constructs are 0.091 (customer satisfaction), 0.277 (performance) and 0.366 (reform policies). Since the values are greater than zero, which in turn in turn specifies the good predictive relevance of the model.

Table-5: Predictive relevance

	<b>SSO</b>	<b>SSE</b>	<b>Q<sup>2</sup> (=1-SSE/SSO)</b>
Customer satisfaction	1604.000	1457.736	0.091
Performance	4812.000	3477.887	0.277
Reform Policies	6015.000	3810.732	0.366

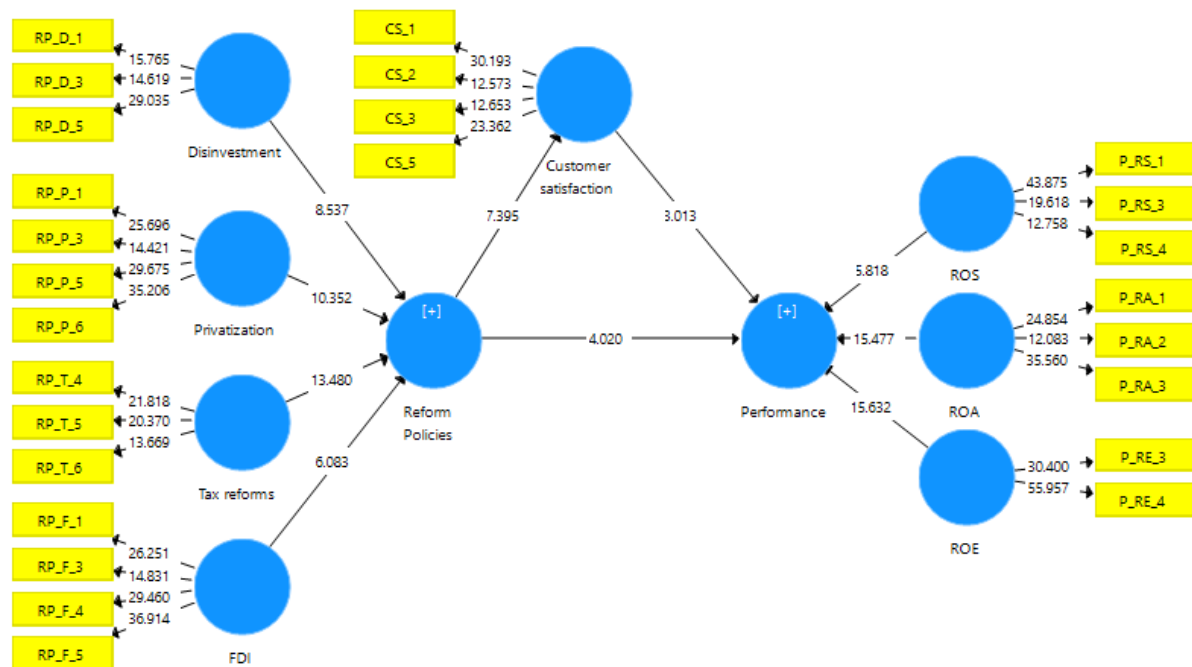
Source: Prepared by Authors (2023)

### Structural model analysis

In Figure-2 path coefficient analysis shows that disinvestment, FDI (t=8.513), privatisation (t=10.748) and tax reforms (t=13.937) significantly effects reform policies (p < 0.01). Further, reform policies (t=7.460) had significant impact on customer satisfaction. Reform policies (t=2.975) had significant impact on the effect of reform policies through customer satisfaction (t = 2.821). Thus, the hypothesis,

***H<sub>2</sub>: Customer satisfaction mediates the impact of reform policies on performance is accepted***

Figure-2: Structure model analysis



Source: Prepared by Authors (2023)

## DISCUSSION

his study was aimed at exploring the influence of customer satisfaction on reform policies and the performance of SAIL. The theoretical framework for the study comes from previous studies on reform policies, performance and customer satisfaction (**Huang & Boateng, 2013; Jayachitra & Venkatraman, 2015; Jones et al., 2007; Ahmed & Amir, 2011; McKinsey, 2019**). Analysis revealed that all four sub-factors, disinvestment, privatisation, tax reforms and FDI significantly affected performance. Furthermore, disinvestment impacted return of sales, return on assets and return on equity whereas privatisation had no impact on return on sale. On the contrary, a study by **Song & Yao (2006)** showed privatisation had a positive impact on profitability. Both tax reforms and FDI did not significantly impact return on assets. The findings suggest that reform policies influenced the performance of SAIL, but only disinvestment affected all three variables of profitability. A study by **Patel & Patel (2016)** showed that disinvestment leads to an increase in marker return. Another study on 15 Central Public Sector Enterprises (CPSEs) showed similar results (**Mandiratta & Bhalla, 2017**). However, another study showed disinvestment leads to a decrease in the profitability ratio of CPSE (**Mandiratta & Bhalla, 2021**). Even though disinvestment affects profitability, other factors can also alter the profitability ratio of PSE (**Gupta & Srivastava, 2016**). Furthermore, our findings revealed that reform policies had a considerable impact on customer satisfaction, which in turn impacted SAIL's performance. This

is per **Williams & Naumann (2011)**, that a significant association exists between satisfaction and an organisation's financial and market performance. A study by **Suchánek & Králová (2015)** showed that product quality and consumer's requirements of a product impacted customer satisfaction.

## CONCLUSION

The study focussed on the influence of customer satisfaction on reform policies and the performance of SAIL. The findings revealed that reform policies had a considerable impact on customer satisfaction, which in turn impacted SAIL's performance. Since customer satisfaction impacts performance government authorities should design or amend and implement appropriate strategies. This will also help PSEs in the steel industry in general or SAIL in specific to improve their services that would be helpful to society and contribute to the nation's growth. This study paves the way to huge scope for future researchers. The scope of the study can be further broadened by including several PSEs across multiple industries to gain comprehensive findings about the impact of reforms on the performance of different types of PSEs. Future researchers can focus on reform policies to identify the impact of one or two specific policies to determine the pros and cons of existing policies. Thus, these policies can be amended or new policies can be formulated accordingly.

## REFERENCES

Anderson, E. W., Fornell, C., & Rust, R. T. (1997). Customer Satisfaction, Productivity, and Profitability: Differences Between Goods and Services. *Marketing Science*, 16(2), 129–145.

Agarwal, P. K., & Gupta, V. P. (2013). Comparative study of customer satisfaction in public sector and private sector banks in India – A case study of Meerut region of U.P. *International Journal of Management*, 1(1), 56–63.

Al-kasasbeh, O., Alzghoul, A., & Alhanatleh, H. (2022). The Impact of Fiscal Policy and Trade Liberalization on Economic Growth: Evidence from Structural Breaks for Jordan. *International Journal of Professional Business Review*, 7(6), e0850. <https://doi.org/10.26668/businessreview/2022.v7i6.850>

Ariani, D. W. (2023). Exploring Relationship of Job Satisfaction, Organizational Culture, and Employee Performance in Small Medium Enterprise. *International Journal of Professional Business Review*, 8(2), e0876. <https://doi.org/10.26668/businessreview/2023.v8i2.876>

Baghel, D., Pawar, P. G., Ingale, P., Ajotikar, M. V., & Sahoo, A. (2023). Effects of Creativity and Innovation on the Entrepreneurial Performance of the Family Business With Special Reference to Banking Sector. *International Journal of Professional Business Review*, 8(4), e0996. <https://doi.org/10.26668/businessreview/2023.v8i4.996>



Baa, R., & Chatteraj, A. K. (2022). The Significance, Role, and Need for Public Sector Enterprises in Economic Growth. *International Journal of Professional Business Review*, 7(5), e0582. <https://doi.org/10.26668/businessreview/2022.v7i5.e582>

Baa, R. (2022). A study on the contribution that a business plan makes to the expansion of a small company. *International Journal of Professional Business Review*, 7(5), e0585. <https://doi.org/10.26668/businessreview/2022.v7i5.e585>

Bath, V., Nayak, B., & Pasumarti, S. S. (2018). The Study of Financial Performance of Indian Public Sector Undertakings. *Global Journal of Finance and Management*, 10(1), 21–43.

Bharat Electronics Limited. (2014).

De, R. (2014). Performance of State Level Public Enterprises of West Bengal: A Study on the Post Reform Era. *IOSR Journal of Business and Management*, 16(4), 29–39. <https://doi.org/10.9790/487x-16462939>

Deepa, N. (2019). A Study on Performance Evaluation of Select Central Public Sector Enterprises in India. *HuSS: International Journal of Research in Humanities and Social Sciences*, 6(2), 72. <https://doi.org/10.15613/hijrh/2019/v6i2/190584>

Gilbert, G. R., Nicholls, J. A. F., & Roslow, S. (1999). Measuring public sector customer service satisfaction. *Public Manager*, 27(4), 21–25. [http://search.proquest.com/docview/236349990?accountid=40690%5Cnhttp://link.periodicos.capes.gov.br/sfxlcl41?url\\_ver=Z39.88-2004&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%3Aproq&title=Measuring+public+sector+customer+service+sati](http://search.proquest.com/docview/236349990?accountid=40690%5Cnhttp://link.periodicos.capes.gov.br/sfxlcl41?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%3Aproq&title=Measuring+public+sector+customer+service+sati)

Gupta, S., & Srivastava, S. (2016). Pre Disinvestment & Post Disinvestment Financial Analysis of Oil and Gas Company in India. *Journal of Global Economy*, 12(3), 205–214. <https://doi.org/10.1956/jge.v12i3.437>

Jain, P., Gupta, S., & Yadav, S. (2014). The Impact of Disinvestment and Self-Obligation on Financial Performance of PSEs in India: An Introduction (pp. 1–5). [https://doi.org/10.1007/978-81-322-1762-6\\_1](https://doi.org/10.1007/978-81-322-1762-6_1)

Jain, P. K., Gupta, S., & Yadav, S. S. (2014). Public sector enterprises in India: The impact of disinvestment and self obligation on financial performance. In *Public Sector Enterprises in India: The Impact of Disinvestment and Self Obligation on Financial Performance* (Issue June). <https://doi.org/10.1007/978-81-322-1762-6>

Janish Kuruthukulangara Jubin. (2021). A study on customer satisfaction of telephone services with special reference to BSNL. 1–40.

Kim, K., & Panchanatham, N. (2021). *Reform and Privatization of State-Owned Enterprises in India*. 1057, 157–168. [https://doi.org/10.1007/978-981-15-8574-6\\_8](https://doi.org/10.1007/978-981-15-8574-6_8)

Mandiratta, P., & Bhalla, G. S. (2017). Pre and Post Disinvestment Performance Evaluation of Indian CPSEs. *Management and Labour Studies*, 42(2), 120–134. <https://doi.org/10.1177/0258042X17716601>

- Mandiratta, P., & Bhalla, G. S. (2021). Disinvestment in Indian central public sector enterprises: a performance improvement measure. *Journal of Economic and Administrative Sciences*, 37(4), 496–521. <https://doi.org/10.1108/jeas-02-2019-0023>
- McKinsey (Hrsg.). (2019). The public sector gets serious about customer experience. August, 1–11.
- Mishra, G. (1985). Public Sector in India. *India Quarterly: A Journal of International Affairs*, 41(2), 296–298. <https://doi.org/10.1177/097492848504100218>
- Mogharabi, V., Akbarabadi, L., Mirnezhad, R., & Kariznoee Student, A. (2014). Examining the role of Electronic Customer Relationship Management (E-CRM) on Attracting Customers in Internet Marketing. *Interdisciplinary Journal of Contemporary Research in Business*, 5(10), 252–260.
- Neshat Anjum. (2020). Exploring the Journey of Steel Authority of India (Sail) as a Maharatna Company . *IMPACT: International Journal of Research in Humanities, Arts and Literature* , 8(9), 45–56.
- Patel, M., & Patel, M. J. (2016). a Study on Impact of Disinvestment on Profitability , Marketability and Market Return of the Psus. *Internation Journal of Science Technology and Management*, 5(2394–1537), 52–62.
- Patidar, V., & Movalia, N. P. (2016). An Empirical Study on Financial Health of NTPC and NHPC. *Pacific Business Review International*, 8(9), 16–22.
- Sharma, D. (2015). Corporate Profitability and Working Capital Management : a Case Study of Steel Authority of India Limited ( Sail ). *Indian Journal of Accounting*, XLVII(June), 98–108.
- Sinku, S. (2014). Analysis of Financial Health of Steel Authority of India Limited. *Industrial Engineering Letters*, 4(12), 6–8.
- Song, L., & Yao, Y. (2006). The impact of privatisation on firm performance in china. In *Globalisation and Economic Growth in China: Vol. Volume 1* (pp. 59–112). WORLD SCIENTIFIC. [https://doi.org/doi:10.1142/9789812773234\\_0004](https://doi.org/doi:10.1142/9789812773234_0004)
- Suchánek, P., & Králová, M. (2015). Effect of customer satisfaction on company performance. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 63(3), 1013–1021. <https://doi.org/10.11118/actaun201563031013>
- Suchánek, P., Richter, J., & Králová, M. (2014). Customer satisfaction, product quality and performance of companies. *Review of Economic Perspectives*, 14(4), 329–344. <https://doi.org/10.1515/revecp-2015-0003>
- T T Ram Mohan. (2003). Privatization and FDI: the Indian experience. *Zitteliana*, 19(8), 159–170. bisnis ritel - ekonomi
- Umakanth Varottil. (2020). Corporate Governance in State-Owned Enterprises. *The Routledge Handbook of State-Owned Enterprises*, 9, 445–459. <https://doi.org/10.4324/9781351042543-25>

Wage policies for decent work and inclusive growth India Wage Report. (2018).

Williams, P., & Naumann, E. (2011). Customer satisfaction and business performance: a firm-level analysis. *Journal of Services Marketing*, 25(1), 20–32. <https://doi.org/10.1108/088760411111107032>

Agarwal, P. K., & Gupta, V. P. (2013). Comparative study of customer satisfaction in public sector and private sector banks in India – A case study of Meerut region of U.P. *International Journal of Management*, 1(1), 56–63.

Ahmed, I., & Amir, M. (2011). Service Quality; Service Features; and Customer Complaint Handling As the Major Drivers of Customer Satisfaction in Banking Sector of Pakistan. 7(1), 313–318.

Bath, V., Nayak, B., & Pasumarti, S. S. (2018). The Study of Financial Performance of Indian Public Sector Undertakings. *Global Journal of Finance and Management*, 10(1), 21–43.

Bharat Electronics Limited. (2014).

De, R. (2014). Performance of State Level Public Enterprises of West Bengal: A Study on the Post Reform Era. *IOSR Journal of Business and Management*, 16(4), 29–39. <https://doi.org/10.9790/487x-16462939>

Deepa, N. (2019). A Study on Performance Evaluation of Select Central Public Sector Enterprises in India. *HuSS: International Journal of Research in Humanities and Social Sciences*, 6(2), 72. <https://doi.org/10.15613/hijrh/2019/v6i2/190584>

Gakhar, D. V. (2019). Goods and Services Tax (GST) in India: Towards Sustainable Economic Growth. 18(1), 7–14.

Gilbert, G. R., Nicholls, J. A. F., & Roslow, S. (1999). Measuring public sector customer service satisfaction. *Public Manager*, 27(4), 21–25. [http://search.proquest.com/docview/236349990?accountid=40690%5Cnhttp://link.periodicos.capes.gov.br/sfxlcl41?url\\_ver=Z39.88-2004&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%3Aapqrl&attile=Measuring+public+sector+customer+service+sati](http://search.proquest.com/docview/236349990?accountid=40690%5Cnhttp://link.periodicos.capes.gov.br/sfxlcl41?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%3Aapqrl&attile=Measuring+public+sector+customer+service+sati)

Gupta, S., & Srivastava, S. (2016). Pre Disinvestment & Post Disinvestment Financial Analysis of Oil and Gas Company in India. *Journal of Global Economy*, 12(3), 205–214. <https://doi.org/10.1956/jge.v12i3.437>

Gupta, S. (2002). Strategic dimensions of corporate image: Corporate ability and corporate social responsibility as sources of competitive advantage via differentiation - ProQuest [Temple University]. <https://www.proquest.com/openview/b50234b0ce4ea7f22eea184c07be80d6/1?pq-origsite=gscholar&cbl=18750&diss=y>

Huang, W., & Boateng, A. (2013). The role of the state, ownership structure, and the performance of real estate firms in China. *Applied Financial Economics*, 23(10), 847–859. <https://doi.org/10.1080/09603107.2013.770121>

Jain, P., Gupta, S., & Yadav, S. (2014). The Impact of Disinvestment and Self-Obligation on Financial Performance of PSEs in India: An Introduction (pp. 1–5). [https://doi.org/10.1007/978-81-322-1762-6\\_1](https://doi.org/10.1007/978-81-322-1762-6_1)

Jain, P. K., Gupta, S., & Yadav, S. S. (2014). Public sector enterprises in India: The impact of disinvestment and self obligation on financial performance. In *Public Sector Enterprises in India: The Impact of Disinvestment and Self Obligation on Financial Performance* (Issue June). <https://doi.org/10.1007/978-81-322-1762-6>

Janish Kuruthukulangara Jubin. (2021). A study on customer satisfaction of telephone services with special reference to BSNL. 1–40.

Jayachitra, S., & Venkatraman, M. (2015). The effect of ownership structure on divestment of manufacturing sector in India. 5(6), 76–92.

Jones, D. C., Kalmi, P., & Mygind, N. (2007). Choice of Ownership Structure and Firm Performance: Evidence from Estonia: Post-Communist Economies: Vol 17, No 1. 17(1), 83–107.

Kim, K., & Panchanatham, N. (2021). *Reform and Privatization of State-Owned Enterprises in India*. 1057, 157–168. [https://doi.org/10.1007/978-981-15-8574-6\\_8](https://doi.org/10.1007/978-981-15-8574-6_8)

Kundan Dutta Koirala; Sajeeb Kumar Shrestha. (2012). Management Dynamics , 16 Measuring Service Quality and Customer Satisfaction : Empirical Management Dynamics , 16. *Management Dynamics in the Knowledge Economy*, 16, 1–13.

Lombart, C., & Louis, D. (2012). Consumer satisfaction and loyalty: Two main consequences of retailer personality. *Journal of Retailing and Consumer Services*, 19(6), 644–652. <https://doi.org/10.1016/j.jretconser.2012.08.007>

Mandiratta, P., & Bhalla, G. S. (2017). Pre and Post Disinvestment Performance Evaluation of Indian CPSEs. *Management and Labour Studies*, 42(2), 120–134. <https://doi.org/10.1177/0258042X17716601>

Mandiratta, P., & Bhalla, G. S. (2021). Disinvestment in Indian central public sector enterprises: a performance improvement measure. *Journal of Economic and Administrative Sciences*, 37(4), 496–521. <https://doi.org/10.1108/jeas-02-2019-0023>

Matzler, K., & Hinterhuber, H. H. (1998). How to make product development projects more successful by integrating Kano's model of customer satisfaction into quality function deployment. *Technovation*, 18(1), 25–38. [https://doi.org/10.1016/S0166-4972\(97\)00072-2](https://doi.org/10.1016/S0166-4972(97)00072-2)

McKinsey (Hrsg.). (2019). The public sector gets serious about customer experience. August, 1–11.

Mishra, G. (1985). Public Sector in India. *India Quarterly: A Journal of International Affairs*, 41(2), 296–298. <https://doi.org/10.1177/097492848504100218>

- Mogharabi, V., Akbarabadi, L., Mirnezhad, R., & Kariznoee Student, A. (2014). Examining the role of Electronic Customer Relationship Management (E-CRM) on Attracting Customers in Internet Marketing. *Interdisciplinary Journal of Contemporary Research in Business*, 5(10), 252–260.
- Neshat Anjum. (2020). Exploring the Journey of Steel Authority of India (Sail) as a Maharatna Company . *IMPACT: International Journal of Research in Humanities, Arts and Literature* , 8(9), 45–56.
- Patel, M., & Patel, M. J. (2016). a Study on Impact of Disinvestment on Profitability , Marketability and Market Return of the Psus. *Internation Journal of Science Technology and Management*, 5(2394–1537), 52–62.
- Patidar, V., & Movalia, N. P. (2016). An Empirical Study on Financial Health of NTPC and NHPC. *Pacific Business Review International*, 8(9), 16–22.
- Raju, B. S. N. (2012). Government Policy and Foreign Direct Investment in Indian Steel Industry-Growth Opportunities. 11(1), 173–183.
- Ramaswamy, K., & Li, M. (2001). Foreign Investors, Foreign Directors and Corporate Diversification: An Empirical Examination of Large Manufacturing Companies in India. *Asia Pacific Journal of Management*, 18(2), 207–222. <https://doi.org/10.1023/A:1010620008101>
- Ravinder, V., & Rupinder. (2007). The Effects of Disinvestment on Financial and Operational Performance of Public Sector Enterprises: Some Reflections. 30(1 & 2).
- Sharma, D. (2015). Corporate Profitability and Working Capital Management : a Case Study of Steel Authority of India Limited ( Sail ). *Indian Journal of Accounting*, XLVII(June), 98–108.
- Singh, G., & Paliwal, D. (2010). Impact of disinvestment on the financial and operating performance of competitive and monopoly units of Indian public sector enterprises. 1(2), 40–57.
- Sinku, S. (2014). Analysis of Financial Health of Steel Authority of India Limited. *Industrial Engineering Letters*, 4(12), 6–8.
- Song, L., & Yao, Y. (2006). The impact of privatisation on firm performance in china. In *Globalisation and Economic Growth in China: Vol. Volume 1* (pp. 59–112). WORLD SCIENTIFIC. [https://doi.org/doi:10.1142/9789812773234\\_0004](https://doi.org/doi:10.1142/9789812773234_0004)
- Suchánek, P., & Králová, M. (2015). Effect of customer satisfaction on company performance. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 63(3), 1013–1021. <https://doi.org/10.11118/actaun201563031013>
- Suchánek, P., Richter, J., & Králová, M. (2014). Customer satisfaction, product quality and performance of companies. *Review of Economic Perspectives*, 14(4), 329–344. <https://doi.org/10.1515/revecp-2015-0003>
- T T Ram Mohan. (2003). Privatization and FDI: the Indian experience. *Zitteliana*, 19(8), 159–170. bisnis ritel - ekonomi

Umakanth Varottil. (2020). Corporate Governance in State-Owned Enterprises. *The Routledge Handbook of State-Owned Enterprises*, 9, 445–459. <https://doi.org/10.4324/9781351042543-25>

Wage policies for decent work and inclusive growth India Wage Report. (2018).

Williams, P., & Naumann, E. (2011). Customer satisfaction and business performance: a firm-level analysis. *Journal of Services Marketing*, 25(1), 20–32. <https://doi.org/10.1108/08876041111107032>



## APPENDIX

Appendix-1 Multivariate test for impact of reform policies on the overall performance

Effect	Wilks' Lambda Value	F	df	Sig.
Disinvestment	0.966	4.585	3, 394	0.004
Privatization	0.953	6.480	3, 395	0.000
Tax reforms	0.959	5.568	3, 396	0.001
Foreign direct investment	0.968	4.411	3, 397	0.005

Appendix-2 Fornell-Larcker Criterion

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Customer satisfaction (1)	0.738							
Disinvestment (2)	0.262	0.764						
FDI (3)	0.362	0.294	0.764					
Privatization (4)	0.363	0.297	0.707	0.760				
ROA (5)	0.371	0.146	0.314	0.314	0.754			
ROE (6)	0.191	0.303	0.249	0.249	0.456	0.848		
ROS (7)	0.365	0.278	0.264	0.264	0.346	0.400	0.762	
Tax reforms (8)	0.355	0.372	0.541	0.538	0.272	0.326	0.181	0.730

Appendix-3 Heterotrait-Monotrait Ratio (HTMT)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Customer satisfaction (1)								
Disinvestment (2)	0.371							
FDI (3)	0.483	0.431						
Privatization (4)	0.488	0.435	0.814					
ROA (5)	0.543	0.220	0.443	0.445				
ROE (6)	0.283	0.490	0.353	0.353	0.726			
ROS (7)	0.530	0.445	0.375	0.376	0.543	0.618		
Tax reforms (8)	0.557	0.594	0.813	0.813	0.450	0.559	0.282	