

## Do Internal Resource Capabilities Determine Export Performance?

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### ABSTRACT

*Assuming firms' internal resource as determinants of export performance, the relation is probed for of Goa's iron-ore exporting using panel data and through use of robust dynamic fixed effect and dynamic effect Tobit model. In a liberalized regime it is identified whether the resource capabilities of firms' help them perform better than other local firms in the export markets. From this paper it appears that the iron-ore industry of Goa though fully integrated with the global economy its internal resource capabilities need further orientation to attract efficiency.*

**Keywords:** Internal Resource Capability, Export Performance, Tobit Model, Firm-level Data, Exports.

### INTRODUCTION:

This paper highlights the importance of internal resource capabilities in determining Goa's Iron-ore export performance. Despite studies on export intensity we provide some value added from the dynamics of export performance from a regional context. Based on export-led regional growth theories we test the explanatory power of firms' internal resources against the collective regional export performance. It is indicated that the initiatives' to identify new markets and by targeting productive capital oriented firms facilitate deeper export penetration and contributes in furthering export growth. Our study is based in the macroeconomic setting using regional panel data. This paper focuses on the firms' internal resource capabilities as determinants of export performance using dynamic binary models using the Tobit estimations. It is found that along with improvements in efficiency, the performance of exports can also be improved by removing structural impediments in terms of provision of better infrastructure and simplification of trade procedures. Such developments on the supply side would necessarily reduce delivery time for exports, improve efficiency in transaction and result in larger volumes of exports. Our analysis of the determinants of Goan iron-ore export performance suggests four results applicable to all local exporters. First, plants with more highly skilled workforces tend to be more successful in export markets. Providing training to workers can also have significant impact. Secondly, in common with other studies, we find that larger plants export larger levels. Export performance however is less than proportionate to plant age. Thirdly, firm location plays a role and fourthly liberalization measures have proved to be beneficial in promoting internal resource capabilities and resultantly in intensifying export intensity among iron-ore exporting firms in Goa.

The Iron-ore mining and export industry still continues to be the predominant factor of Goa's economy being the single largest contributor to the state Gross Domestic Product. Goa accounts for almost 50% share in the total ore exports from India and contribute a share of nearly 4% in the global iron-ore export trade. Promoting export development has also been an important strand of industrial policy in both Goa through direct measures focusing on marketing, and indirect measures focusing on improving firms' international performance. There is a dearth of firm-level studies for the Goa's Iron-ore extracting firms and determinants of export performance. Dunning (1994, 1998) and UNCTAD (1999) report the impact of recent increasing governmental efforts and various push and pull factors on the export enhancing role of firms in a region / industry particularly in developing countries, the empirical studies on this issue are scarce. Given the study by Roberts and Tybout

(1997) that different forces determine export behavior of firms in different countries and industries, the present attempt is to improve the prediction and measurement of regional export by revisiting the role of resource capabilities and export performance.

Previous researches in the area of performance evaluation of export markets deals with the contribution of export to growth, understanding the factors affecting trade performance in relation to terms of trade, productivity, and the effectiveness of industrial and trade policies. Very few studies document the measurement of export intensity at the firm-level. Specifically, firm-level studies have not been conducted for the Goa's Iron-ore extracting firms by analyzing of changing Goa's iron-ore export behavior during 1987 (post Statehood) to 2010.

## **LITERATURE ON RESOURCE CAPABILITY AND EXPORT PERFORMANCES:**

The present study attempts to provide empirical evidence to the rising literature on firm-level export performance and investigate the role of firms' internal capabilities on its export performance in a regional context. Global evidence on the resource capabilities and determinants of export has been mixed. Thus there is a need to have a deeper understanding on trade performance and role of industry and regional variables in the micro-level setting.

The export marketing literature is unanimous that the quantification of the various elements of export performance (intensity). Past evidence finds performance at a firm-level necessitates role of the entrepreneur, knowledge, technological capability, human capital and learning process. All firms face the same macroeconomic condition yet they respond and perform differently in their export behavior and if so, then, there must be firm-specific characteristics that significantly affect its performance in the world market. Two dimensions of firm level export performance have been focused upon: export propensity and export intensity. Among the two dimensions, export propensity (willingness / ability) features more prominently in the literature. Hiep and Nishijima (2009) using micro-data studies find that around 90% of them deal with export propensity. Trade pattern is largely explained by comparative advantage (Ricardo, Heckscher-Ohlin). Sousa (2004) lament that there are many potential drivers for export performance. Recently, some studies like that by Gemunden (1991) and Shoham (1998) have focused on possible ways to surmount these challenges. In response to Dhanaraj and Beamish's (2003) call for the development of parsimonious models, some studies like that by Leonidou (2003), Styles et al. (2003) Child et al. (2003), Wollin and Perry (2004) apply broader bases to the study of export performance.

There are multiple internal and external factors according to Cavusgil and Zou (1994) and Calantone et al. (2002) that have a direct or indirect relationship with export performance. These factors include firm demographics such as size (Bonaccorsi, 1992; Mittelstaedt et al., 2003), age (Brouthers and Nakos, 2005; Ursic and Czinkota, 1984), export experience (Kirpalani and MacIntosh, 1980), technology (Sterlacchini, 1999; Wignaraja, 2002), capital intensity (Wakelin 1998), marketing expertise (Ogunmokun and Ng, 2004), management traits (Dichtl et al., 2000), productivity and human capital (Alvarez, 2002), investment in R&D (Cooper and Kleinschmidt, 1985; Bleaney and Wakelin 1999), business maturity (Görg and Ruane, 2000) and export destination (Ruane and Sutherland, 2005). Further, there are numerous objective and subjective measures according to Zou, et al. (1998) for operationalizing performance.

## **DATA AND VARIABLES:**

The study uses both secondary and primary sources of data. The secondary data over the period 1987-2011 on Goa's firm-level iron-ore exports is drawn and compiled from the information requested from the Goa Mineral Ore Exporters Association (GMOEA), and Goa Chamber of Commerce & Industry (GCCCI) Panjim-Goa. For the periods and parameters the data was not available, the data was tabulated and compiled from the archives requested from the respective firms. For primary data personal visits were preferred because it results in low cost and faster response times. Though the firms did not decline to disclose firm-level information, maintain not to reveal identities on grounds of confidentiality. The data used is taken from the two surveys of export activity conducted between November 2007 and March 2011, covering plants' activity during the 2006-07 periods, and 2010-11. As part of both of the surveys, plants were asked about their export propensity and also provided a range of background information on the plant itself.

As part of the surveys, plants were asked about their export performance and also asked to provide a range of background information on the plant itself, specifically relating to their resources capabilities. In international studies, export performance has been modeled on a host of firm specific attributes and sector wide factors. The underlying literature reviewed in the previous sections outline that there is a certain level of consensus on what the

determinants of export performance might potentially be. In our regional context, export intensity was selected as a proxy for export performance in accordance with Enderwick and Ronayne (2004) and Lages and Lages (2004). Though some studies have utilized export sales as a performance measure, we adjust this variable by expressing it as a proportion of the number of employees to account for the differences in size. Firm relative size, human capital, capital and technology intensity, R&D expenditures, raining, firm age, firm concentration, number of export markets serviced, firm location and time dummy are selected as the independent variables. The following independent variables do not represent the casual link running from them per se to export intensity instead, the coefficient informs on whether exporting firms with higher productivity export a greater share of their output.

The variable Relative Firm Size (RS) is measured relatively, using sales turnover to number of employees. Theoretically the variable RS is predicted to affect export performance of firms positively and thus it is hypothesized that RS will have a positive impact on export insensitivity. Variable Human Capital (HC) is measured in lag. Strongly related with technological capabilities where skills and education are preferred features for the foreign market. The number of skilled employees to total employees of the firm constitutes HC. Positive relation between HC and our dependent variable is hypothesized. The Capital Intensity (CI) variable posits that since past innovations and knowledge are embodied in the capital goods, higher capacity firms are expected to be associated with higher export intensity thereby giving the concerned firm access to superior extraction technology, management know-how, and logistic networks. This variable is the ratio of the total money value of capital equipment to the total potential output and a positive relation with export intensity is expected. R&D to Sales (RD) measure research and development expenditure and is associated with technology and knowledge acquisition and is intended to provide a positive impetus to export intensity of the firm. Local R&D activity confers competitive advantages on all firms automatically and these capabilities are reflected in research and development intensity that is expected to affect their export performance positively. The Firm Age (FA) is based on the date of birth of the firm and proxies the firm's market experience and is an informative and empirically sound approach for operational zing firm demographics as per Hoang (1998). In this context it is hypothesized that the relation of FA with our dependent variable will be positive. Firm Concentration (FC) variable proxy competition. This ratio indicates few firms garnering much of the market. Sector export intensity is included to proxy for the sector's competitive advantage in international markets. A positive relation is indicated with export intensity. The first lag of Export Market Diversification (MD) is measured by the number of export markets serviced by a firm and it is hypothesized that a presence in more number of foreign markets should result in higher export intensity.

We resort to use two dummies. Training Dummy (TDum) hypothesizes that if the concerned firm has regular training to its work force on its agenda. Since training is expected to enhance learning and accumulates additional skills which can improve productivity, a positive relation with the dependent variable is expected. The Location Dummy (LDum) variable assumes a value of 1 if the firm has locational advantages in terms of proximity to a river / rail for obvious cost and time advantage in logistic arrangements.

### **TOBIT MODEL ESTIMATION:**

Taking into account of the findings of previous studies in both the neo-endowment and technology-based traditions, our model of export performance include a number of indicators of plants' operating and organizational characteristics. The form of the dependent variable (i.e. export propensity) viz. export intensity is left-censored at zero and is a percentage of total extractions in a year with one year lag suggesting that the appropriate estimator is Tobit. The usage of OLS method in such cases leads to biased and inconsistent estimates as per Cheng (1992). The Tobit method takes care of this problem. In the Tobit approach we have the option of estimating the coefficients through either the Fixed Effects Model (FEM) or the Random Effects Model (REM). The estimation of the REM depends on the assumption of no significant correlation between the effects and the explanatory variables. The Hausman test using our firms' panel data is carried out. The calculated Hausman statistic for values is not significant at 5% level and hence we may justifiably use the REM for estimation of our equation. According to Mundalak (1978), if we want to draw inference with respect to the population of all the three effects, viz., firm specific, time-specific, and both firm and time specific we should use the REM. On the other hand, if one is looking for inferences conditional on the effects existing in the sample, the FEM is ideal. Since we are interested in the present exercise to make inferences for the population of firms based on an examination of our sampled cross-section firms, it is appropriate to view firm-specific constant terms as randomly distributed across different cross-sectional units.

If the relationship parameter  $\beta$  is estimated by regressing the observed  $Y_i$  on  $X_i$ , the resulting OLS regression estimator is inconsistent. It will yield a downwards-biased estimate of the slope coefficient and an upwards-

biased estimate of the intercept. It is proven that the maximum likelihood estimator suggested by Tobin for this model is consistent. The  $\beta$  coefficient should not be interpreted as the effect of  $X_i$  on  $Y_i$ , as one would with a linear regression model; this is a common error. Instead, it should be interpreted as the combination of the change in  $Y_i$  of those above the limit, weighted by the probability of being above the limit; and the change in the probability of being above the limit, weighted by the expected value of  $Y_i$ .

The structure of the Goa's iron-ore extracting firms' panel with small  $T$  and relatively large  $N$  suggests the difficulty of estimating the number of parameters required by a FEM, however, and where appropriate a random effects structure is therefore preferred in following Roper and Love (2001). It is also found that there does not exist any substantial correlation between different explanatory variables.

The general Tobit model is expressed as

$$Y_i = \beta_1 + \beta_2 X_i + \mu_i \text{ If } RHS > 0 \dots\dots\dots 1$$

$$= 0 \text{ otherwise } \dots\dots\dots 2$$

Let  $X_{it}^*$  be a latent (i.e. unobserved) variable, then our model specification is

$$X_{it}^* = \beta_0 + \beta_1 RS_{it} + \beta_2 HC_{it} + \beta_3 CI_{it} + \beta_4 RD_{it} + \beta_5 TDum_{it} + \beta_6 FA_{it} + \beta_7 FC_{it} + \beta_8 ED_{it} + \beta_9 LDum_{it} + \beta_{10} TDum_{it} + \varepsilon_{it} \dots\dots\dots 3$$

Where  $\beta_1$  is **RS**= relative size,  $\beta_2$  is **HC**= human capital, **CI**= capital intensity, **RD**= R&D, **TDum**= training dummy, **FA** = firms' age, **FC**= firm concentration, **ED** = export destinations serviced, **LDum** = location dummy and  $\beta_{10}$  is **TDum** = time dummy

and it is hypothesized that  $\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 > 0, \beta_6 > 0, \beta_7 > 0, \beta_8 > 0, \beta_9 > ?$ , and  $\beta_{10} > 0, \dots\dots\dots 4$

$$\text{Where } X_{it} = \begin{cases} X_{it}^* & \text{if } X_{it}^* > 0 \\ 0 & \text{if } X_{it}^* \leq 0 \end{cases} \text{ and } \varepsilon_{it} = \alpha_i + \mu_{it} \dots\dots\dots 5$$

It is assumed that  $u_{it} \sim N(0, \sigma_u^2)$ ,  $\alpha_i \sim N(0, \sigma_\alpha^2)$  and that  $u_{it}$  and  $\alpha_i$  are mutually uncorrelated,  $E(\alpha_i \alpha_j) = 0$  and  $E(u_{it} u_{js}) = 0$  if  $i \neq j$  and  $s \neq t$ .  $\dots\dots\dots 6$

This means that  $\sigma_\varepsilon^2 = \sigma_\alpha^2 + \sigma_u^2$ .  $\dots\dots\dots 7$

and it implies that for any given time period the latent variables  $X_{it}^*$  are independent.

For given any  $i$ ,  $X_{it}^*$  are correlated over time and therefore the correlation parameter is

$$\gamma = \sigma_\alpha^2 / \sigma_\varepsilon^2. \dots\dots\dots 8$$

This correlation is constant through time and higher where the 'individual effect'  $\alpha_i$  has greater variation, i.e. there is more unobserved heterogeneity among firms as per Hamerle and Ronning (1995).

## EMPIRICAL FINDINGS AND DISCUSSION:

**Table 1: The Effect of Internal Resources on Iron-ore Export Performances**

Independent Variables	Fixed Effects Tobit Model		Random Effects Tobit Model	
	Coefficients	Robust Standard Errors	Coefficients	Robust Standard Errors
Intercept	-15.82**	0.0027	-17.89***	0.0049
<b>Internal Resource factors</b>				
Relative Size	0.016**	0.0005	0.072*	0.009
Human Capital	0.429	0.083	0.631**	0.0031
Capital Intensity	0.245***	0.092	0.251***	0.062
R&D to Sales	0.563**	0.254	0.541*	0.3460
Training Dummy	0.008	0.2167	0.013**	0.0054
Firm Age	-0.008**	0.0004	-0.040**	0.012
Firm Concentration	0.1053	0.076	0.0691	0.0061
First lag of Export Market Diversification	-0.0135**	0.0052	0.0423	0.0821
Location Dummy	0.1567***	0.043	0.1705**	0.0046
Time Dummy	0.872***	0.0053	0.016**	0.0040
Log Likelihood Ratio	390.23		344.56	
R squared	.3443		.3913	

**Notes:** \* denotes significance at 10%, \*\* denotes significance at 5%, \*\*\* denotes significance at 1%.

Firm specific internal attributes and sector wide characteristics have been used to model export performance. Among the internal capabilities, relative firm size, human capital, capital intensity, R&D and training are focused upon, whereas the firm age, firm concentration, and export market diversification proxy firms' characteristics. Firm location is a dummy variable measuring the location advantage of the firm in respect of its logistics.

In accordance with the specification in full sets of time dummies are included. This additional variable controls for un-observables which might be related to time specific. Moultons' (1990) show that such regressions produce standard errors that are biased downwards and as a result give spurious results. This problem is solved using clustered standard errors. The results are based on the FEM and REM estimates. Using both specifications serves two purposes. First, it increases the quality of interpretation and also tests for sensitivity. The model estimated using the REM is preferred and used for interpretation. The FEM is rejected by the Hausman test at less than 1 % level of significance. Estimated coefficient of the Tobit models has the strong and positive effect on export propensity of the strength of firms' internal resource base than on characteristics. Evidence suggests that the export performance of a firm is not a function of the export intensity of the exporters in the sector. It is found that the sector wide characteristics do not determine iron-ore exporting firms' exporting performance. It is also found that more productive exporters consistently export a larger share of their output.

The new trade theory suggests a positive impact of market due economies of scale as economy provides cost advantages in production, R&D and marketing efforts as per Kumar and Siddharthan (1994). The export marketing literature also suggests that big firms have greater resources to gather information on markets in foreign countries and to cover uncertainties of a foreign market. It is, therefore, according to our hypothesis that large firms are likely to be more export-oriented; capable of bearing large investment and high risks associated with exporting. Using a resource-based perspective Penrose (1959) and Wernerfelt (1984) argue that firm size is a proxy for internal resource endowment of a firm. Larger the size greater may be quality of management, technological intensity, or investment in research and development as per Ali (2004) and have direct effect to export performance. The resource-based assumption thus suggests that bigger firms may perform better because of size of it has under its command.

As per our hypothesis plants with high proportion educated manpower have higher export propensity also for plants with an in-house R&D capability. This positive result for R&D also suggest a strong positive relationship between non-price quality and plants' export competitiveness as per Anderton (1999, 1999a). Theory suggests that higher capital intensity make firms' outward oriented. They are found to be empowered with more technology and better management capabilities. Our hypothesis is therefore not rejected that the export performance of iron-ore exporting firms heightens with heightened capital performance. This suggests that larger degree of capital affiliated firms have an edge over their local counterparts in overseas markets and are likely to enjoy higher export intensity.

It is found that age is inversely associated with export propensity. The null hypothesis about age is rejected. Maturity of firm doesn't explain growing export performance. A association of market diversification and export performance enhances the destination markets of a firm and boosts its exports. Market concentration ratio is not a significant variable. Plants' location is found to be an important determinant of export propensity. As we might expect from the contrast between average export propensity in Northern Goa and the Southern part of Goa, plants in the North Goa have significantly higher export propensity than similar plants in south. This might reflect differences in, say, the operating environment and say distributional channels in North Goa and the South. If export marketing support was more effective in the South, for example, this might raise south located plants' export propensity *ceteris paribus*. Our time dummy included in the regression is significant and stresses on the positive reform effect on the export performance of firms' supporting our hypothesis that liberalization measures of the 1990s enhanced the export-role of individual firms' in the late 1990s. Results suggests that increasing liberalization of the economy, intensified competition and exchange rate correction favored firms in the world markets in the 1990s.

Our results provide meaningful insights to the earlier researches in these areas. The age (experience of firm's) negative impact means that export performance does not appear to endorse theories of experiential learning and various models on the growth of the firm. Firm size on the other hand turns significant with a positive sign in both the estimations. Most previous studies for instance Lall and Kumar (1981) and Patibandla (1995) find that smaller firms are more export oriented in the restrictive regime then very large firms. The present study however shows that firm size may be directly related to performance due to indirect benefits of size such as the ability to develop greater managerial, product and marketing competencies as Cavusgil (1984) finds.

Mowery and Oxley (1997) find that age /maturity act as an important determinant of firms' export performance. It is also advocated that though acquisition of technology may be a key factor, it is the utilization of techniques makes it valuable and there are two requirements for this. First, the firm must hire skilled persons they must organize to make use of employees' skills effectively. This is emphasized by Lazonic (1993) and Lall (1999). In

accordance with the earlier findings we find support for human capital and capital intensity as a determinant of export performance. However we find no evidence for its maturity / age of firm on its performance. In this regard we find no support for Naidu and Prasad's (1994) evidence which note that firms in export intensive sectors are more likely to learn to become more regular exporters.

These empirical results are important from three standpoints. First, from a policy point of view they emphasize the importance of R&D and associated developments to export competitiveness and growth. Secondly, emphasize contrasts between the different types of R&D activity which influence export propensity. Plants' export propensity is found to be positively influenced by both location and time dummy. The net effect is found to be both positive and significant. Overall, this analysis advocates using multiple variables as no factor explores the dynamics of export performance. Our empirical addition further supplements the work of Aaby and Slater (1989), Thirkell and Dau (1998) and Zou et al. (1998) in the field of export performance and behavior.

## **SUMMARY AND CONCLUSIONS:**

This study aims to improve the research availability on export performance by unearthing the indicators of export firm performance. Given that few Goa's iron-ore extracting firms only with inherent advantage predominates the export basket, the issue concerning our study is what are the predominant characteristics of Goa's iron-ore extracting firms? It is attempted to investigate and answer which internal resource factors do influence export performance to what extent? It is also studied as to what explain stark differences in firm performance given that they are located differently i.e. How export performance is affected despite that North & South Goa share a common geographical situation i.e. when both are 'peripheral' to the foreign markets? Very particularly we strive to explore answers to two pronged objectives. We examine industry-effect on the determinants of the firm-level export performance for iron-ore extracting firms from the Goa state.

Important observations from our study are that the iron-ore industry of Goa is fully integrated with the global economy and that the technological capabilities need to be developed further to make it efficient. There have been changes in the export structure after liberalization and that the export performance of firms was linked strongly with firm size and capital intensity, R&D among others. Two, our estimation from fixed effect for supply elasticity and REM for export performance models reveal that efficient exporters export a larger output and higher support to these firms will yield higher exports and thirdly, the export performance of a firm is positively influenced by the number of export market serviced as per the orders of the new trade theory. Government action to facilitate export entry to new foreign markets would lead to higher exports. In policy terms, this study emphasizes again the positive relationship between an aspect of business performance (i.e. export propensity), size of the firm, capital intensity, workforce quality and research and development in context of a Goan economy.

## **REFERENCES:**

- Ali, M.Y., (2004). Impact of Firm and Management Related Factors on Firm Export Performance, *Journal of Asia Pacific Marketing*, 3 (2), 5-20.
- Bhagwati, J., and T. N. Srinivasan. (1975). *Foreign Trade Regimes and Economic Development: India*, New York: Columbia University Press (for the NBER).
- Bonaccorsi, A., (1992). On the Relationship Between Firm Size and Export Intensity, *Journal of International Business Studies*, Vol. 23(4), pp. 605-635.
- Cavusgil, S. T. and S. Zou, (1994). Marketing Strategy-performance Relationship: An Investigation of the Empirical Link in Export Market Ventures, *Journal of Marketing*, Vol. 58, January, pp. 1-21.
- Child, J., Chung, L., Davies, H., (2003). The Performance of Cross Border Units in China: A Test of Natural Selection, Strategic Choice and Contingency Theories, *Journal of International Business Studies*, 34, 242-254.
- Dhanaraj, C., and Beamish, P.W, (2003). A Resource-based Approach to the Study of Export Performance, *Journal of Small Business Management*, 41 (3), 242-261.
- Dunning, J.H., (1994). Re-evaluating the Benefits of Foreign Direct Investment Transnational Corporations, 3, February 23-52.
- Dunning, J.H., (1998). *Changing Geography of Foreign Direct Investment: Explanations and Implications in Nagesh Kumar et al. Globalisation*, Foreign Direct Investment and Technology transfers: Impacts on and Prospects for Developing Countries, London and New York : Routledge.
- Görg H., and Ruane F., (2000). An Analysis of Backward Linkages in the Irish Electronics Sector, *The Economic and Social Review*, 31, 3, 215-235.
- Hoang, B.P., (1998). A Causal Study of Relationships Between Firm Characteristics, International Marketing

- Strategies, and Export Performance, *Management International Review*, 38 (Special Issue 1), 73-93.
- Joshi, V., and I. M. D. Little, (1998). *India's Economic Reforms 1991-2001*, Clarendon Press, Pp xiii +282, ISBN 0-19-829078-0.
- Kao, Chihwa, and Min-Hsien Chiang, (2000). On the Estimation and inference of a Cointegrated Regression in Panel Data, (Unpublished: Syracuse: University of Syracuse).
- Katsikeas, C.S., Leonidou, L.C., Morgan, N.A., (2000). Firm-level Export Performance Assessment: Review, Evaluation and Development, *Journal of the Academy of Marketing Science*, 28 (4), 493-511.
- Krishnamurthy, K. and V. Pandit, (1995). *India's Trade Flows: Alternative Policy Scenarios: 1995-2000*, Working Paper No.: 32, Delhi: Centre for Development Economics, Delhi School of Economics.
- Kumar, N., and N. S. Siddharthan, (1994). Technology, Firm Size and Export Behavior in Developing Countries: The Case of Indian Enterprises, *Journal of Development Studies*, Vol. 31(2), pp. 289-309.
- Lall, S., (1999). India's Manufactured Exports: Comparative Structure and Prospects, *World Development*, 27 (10): 1769-86.
- Lall, S., and R. Kumar, (1981). Firm-Level Export Performance in an Inward Looking Economy: The Indian Engineering Industry, *World Development*, Vol. 9(5), pp. 453-463.
- Leonidou, L. C., (2003). Overcoming the Limits of Exporting Research Using the Relational Paradigm, *International Marketing Review*, 20 (2), 129-142.
- Muscattelli, V.A., T. G. Srinivasan, T.G., and D. Vines, (1992). Demand and Supply Factors in the Determination of NIE Exports: A Simultaneous Error-Correction Model for Hong Kong, *Economic Journal*, 102 (415): 1467-1477.
- Nayyar, D., (1976). *India's Exports and Export Policies in the 1960s*, Cambridge: Cambridge University Press.
- Nayyar, D., (1988). *India's Export Performance: Underlying Factors and Constraints*, in R.E.B. Lucas and G.F. Papanek (eds.), *The Indian Economy: Recent Development and Future Prospects*, Delhi: Oxford University Press.
- Ogunmokun, G., Ng, S., (2004). Factors Influencing Export Performance in International Marketing: A Study of Australian Firms, *International Journal of Management*, 21 (2), 172-185.
- Patibandala, M., (1995). Firm Size and Export Behavior: An Indian Case Study, *Journal of Development Studies*, Vol. 31(6), pp. 868-882.
- Posner, M. V., (1961). *International Trade and Technical Change*, Oxford Economic Papers, No. 13, pp. 323-341.
- Roberts M. J., and J. R. Tybout, (1997). The Decision to Export in Colombia: An Empirical Model of Entry with Sunk Costs, *American Economic Review*, Vol. 87, No. 4, pp.545-564.
- Shoham, A., (1998). Export Performance: A Conceptualization and Empirical Assessment, *Journal of International Marketing*, 6 (3), 59-81.
- Sinha Roy, S., (2001). *Post-reforms Exports Growth in India: An Exploratory Analysis*, RIS-Discussion Paper # 13, New Delhi: Research and Information System for the Non-aligned and Other Developing Countries.
- Sinha Roy, S., (2002). *Persistence in India's Manufactured Export Performance*, RIS-Discussion Paper # 29, New Delhi: Research and Information System for the Non-aligned and Other Developing Countries.
- Sousa, C.M.P., (2004). Export Performance Measurement: An Evaluation of the Empirical Research in the Literature, *Academy of Marketing Science Review*, 9, 1-22.
- Stock, James H., and Mark W. Watson, (1993). A Simple Estimator of Cointegration Vectors in Higher Order Integrated Systems, *Econometrica*, Vol. 61, pp. 783- 820
- Styles, C., Patterson, P.G., Ahmed, F., (2008). A Relational Model of Export Performance, *Journal of International Business Studies*, 39, 880-900.
- Thirkell, P.C., Dau, R., (1998). Export Performance: Success Determinants for New Zealand Manufacturing Exporters, *European Journal of Marketing*, 32 (9/10), 813-823.
- UNCTAD, (2000). The Post-Uruguay Round Tariff Environment for Developing Country Exports: Tariff Peaks and Tariff Escalations, UNCTAD/WTO Joint Study – TD/B/COM.1/14/Rev. 1, January 28.
- Vernon, R., (1966). International Investment and International Trade in the Product Cycle, *Quarterly Journal of Economics*, 80, pp. 190-207.
- Virmani, A., (1991). Demand and Supply Factors in India's Trade, *Economic and Political Weekly*, 309-314 February.
- Wernerfelt, B., (1984). A Resource-based View of the Firm, *Strategic Management Journal*, 5 (2), 171-180.
- Wollin, D., Perry, C., (2004). Marketing Management in a Complex Adaptive System: An Initial Framework, *European Journal of Marketing*, 38 (5/6), 556-567.
- Zou, M., and S. Stan, (1998). The Determinants of Export Performance: A Review of the Empirical Literature between 1987-1997, *International Marketing Review*, Vol. 15, No. 5, pp. 333-356

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