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Profiling India's Rising Exports and E-commerce: A Critical Evaluation

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ABSTRACT
In light of the current initiative to transform India into an e-empowered economy in order to boost exports, this study aims to contribute to that effort. According to the study's assumption, e-commerce provides a suitable platform to minimize the expenses involved with entering and maintaining presence in international markets. After controlling for exporter self-selection, the empirical investigation zeroes down on export choice and export intensity to determine how they react to e-commerce. An endogenous treatment-effects regression model is necessary because patients may make non-random decisions on which therapy to receive. Using data from a sample of 2,191 manufacturing enterprises from 2010 to 2016, we find that firms that embrace e-commerce are, on average, 21.8% more likely to be exporters, and their export intensity is likely to grow by 7.9%.

Keywords- E-empowered economy, E-commerce, lnternational markets, Manufacturing enterprises, Exporters etc.

INTRODUCTION

Exports react not just to macro and observable and unobserved company and sector characteristics, but also to expenses involved with entering and maintaining presence in foreign markets, as is becoming more apparent to traders, policymakers, and scholars. Typical examples of these expenditures include research into potential markets, product packaging, and quality improvement. As a result of these prices, many consequences emerge. First, due to accumulated costs limiting the scope of flexibility, the number and type of producers that export in the current period is highly dependent on the number and kind of producers that export in the previous period. Second, the expenses associated with ex post reverting/realigning might render temporary policy changes or macro shocks permanent alterations in market structure. That is to say, "hysteresis" in trade flows is caused by expenses. Third, when market circumstances in the future are unknown, incurred expenses act as a barrier, dictating entrance and departure patterns. Fourth, returning exporters have an easier difficulty breaking into the market than first-time exporters. After a certain point, however, re-entry challenges are on par with those of a first-time exporter. This is because a significant portion of the expenditures incurred by exporters are tied to knowledge that will be lost once the company leaves the market. Therefore, it is crucial that a significant percentage of businesses, both established and new, find exporting more lucrative as a result of cost reductions.

The aforementioned expenses may sometimes be reduced by the use of e-commerce, which is often regarded as a ready platform. To begin with, it makes it more affordable to acquire certain material, whether the exchange is one-to-one, many-to-many, or many-to-many. Given the breadth of the potential market, economies of scale in supplying content to customers make it even more crucial. Second, it facilitates asynchronous interaction, which means that data may be accessed whenever it is needed. When dealing with international business and the several time zones that come with it, this feature becomes invaluable. Third, it provides a great lot of leeway in information management by facilitating significantly more interaction and search capacity than catalogues or menu-driven data. The vendor may construct a solid model for market and product development with the aid of simple and cheap data collection. The fourth benefit is that customers may quickly sift through millions of listings by directing inquiries to these digital marketplaces. The most noticeable effect of this expanded audience is better buyer-seller compatibility. Fifth, it greatly reduces distribution expenses. The elimination of in-store handling, theft, rent, and sales charges all add up to significant cost reductions. As a result of having centralized inventory, internet retailers may save money. Stocking merchandise in a few of distribution centers rather than every shop individually may help a business save a lot of money. Seventh, the possibility for individualized production is high. E-commerce, as Dell Computer Corporation exemplifies, may result in substantial savings and improvements in the fit between consumer preferences and the products purchased. Eighth, it aids in effective customer-client relationship management with mass customization by integrating all transactions related to a specific account and allowing for the creation of marketing insights based on the data, feedbacks, ratings,

and online surveys provided by customers and clients.

Organizational concerns, compatibility with current systems, and the transaction costs associated with e-commerce are the main roadblocks. For "collaborative replenishment schemes" to be successful, for instance, in which the supplier is responsible for ensuring that the retailer's stock is always stocked with the necessary supply, there must be a significant reorganization of information sharing, motives, and roles and responsibilities. In addition, for there to be effective communication between businesses, it is necessary for each business to commit to adhering to industry-specific information formats. Such reorganization and compliance may be time-consuming and contentious. Moreover, if any issues do emerge, there must be quick and easy ways to resolve them. To avoid the "free rider" dilemma between department stores (where customers can see the inventories in person) and online retailers (who have reduced overhead expenses), some merchants are reluctant to offer their wares online.
When it comes to rivalry, e-commerce websites have it both ways. Established brand identities, solid regional networks, and strong infrastructure are crucial for conventional offline "brick-and-mortar" enterprises to get a product from the warehouse to the client, giving them a significant strategic advantage. The incumbent counterparts, on the other hand, spend heavily on customer acquisition and infrastructure development in order to attain efficient scale in their hurry to secure the e-commerce landscape and win market dominance. The costs in both scenarios often arise from a combination of aggressive pricing mechanisms and/or expensive marketing budgets. This creates an inherent hurdle for less well-off businesses to enter the market.

Testing the receptivity of exports to online trade is another difficult task. First, a favorable response from exporters is possible only if the perceived cost benefits of e-commerce outweigh the cost of adoption and the competitive pressures. However, if the inverse is accepted as true, e-commerce's impact on exports would be negligible. Thus, ex ante for a sample of enterprises, there is no evident reason to assume any particular direction of responsiveness of exports to e-commerce; thus, the only method to answer the issue is via in-depth empirical inquiry. Second, a company's self-selection to enter a foreign market determines the extent to which it would export. Firms may choose to export by totally non-random means, thus it's vital to account for self-selection. Firms that do and do not export may vary in a variety of ways, including motivation, capability, and experience. Third, the onus is on determining if there is a difference between the exports of enterprises treated with e-commerce and those not treated with e-commerce at both the export decision and export intensity stages. When the source of the therapy is internal, like here, the responsiveness measurement has to be handled with care to provide reliable findings. Last but not least, the link between exports and e-commerce may be complicated by a number of reasons. Among them are the policy regime, the level of uncertainty, the nature of the market, the company and industry characteristics that can and cannot be observed, and the flexibility of demand. These potential sources of error must be adequately mitigated.

LITERATURE REVIEW

The promise and growth of online shopping

Many variables have been discovered to influence the adoption choice of ICTs in organizations, according to previous research that have looked at technology in general. These may be broken down into internal and external elements, as proposed by Lefebvre & Lefebvre. Considerations unique to the company itself might include things like size, age, and focus. Larger, more established businesses often have the means and the need to go out in front of the competition by being the first to implement new information technology. In addition, it has been highlighted that variations in business model and industry have a significant role in the purchase of telecommunications goods and services. There are varying degrees of influence from the outside world at the industrial, macroeconomic, and national-policy levels. These outside forces modify the overall and competitive setting in which a business must function. For instance, businesses in areas with abundant telecommunications bandwidth have easier access to the kinds of technology services needed to power e-commerce platforms. Having such access is more common in cities than in the suburbs or the countryside. Ghosh and Dasgupta et al. provide instances of US-based enterprises that have used the internet as a method of communication and distribution because of the rising trend of businesses in underdeveloped nations to embrace electronic technology.

However, Dholakia and Kshetri provide contrasting evidence to Ghosh by demonstrating how, in response to competitive pressure from suppliers and consumers in affluent nations, a growing number of enterprises from developing countries are using electronic technology as a method of communication and distribution. There are many examples, Schware and

Kimberley note, of enterprises, especially conventional, small, older firms, that have failed because they were unable or unable to show an EDI capacity.

The Price of Exporting

Baldwin, Baldwin and Krugman, and Dixit were among the first economic models to factor in the fixed costs of joining and remaining in foreign markets when analyzing the export choices of companies. These theories imply that the initial sunk cost of entering a foreign market is high, whereas the ongoing sunk cost of operating in that market is low. Melitz builds on previous studies by outlining a framework for export choices in the context of heterogeneous enterprises with sunk entry costs and productivity uncertainty. To be more precise, he demonstrates that only the most productive enterprises join the export market, while the least productive ones leave it at the same time. The initial models of export choice have been expanded in recent empirical investigations to account for variation in the capabilities and opportunities of production units. The following are examples of empirical regularities seen across different economic systems.

To begin, the choice to export is often permanent. In general, more than 80% of exporters keep on exporting the next year, whereas approximately the same percentage of non-exporters stop doing so. Second, compared to non-exporters, exporters are often larger and more productive. Compared to non-exporters, those that do so are at least 10% more productive, employ 70% more people, and consume 10% more capital per employee. Third, export penetration expenses are 15–45% of an organization's total export value per year. The ongoing expenses are far lower, amounting to around 1% - 5% of the total yearly export value.

Framework for macro and micro policy

Due to the country- and time-specific character of the method for maintaining exports, it is a topic of ongoing dispute. Therefore, any research that aspires to provide a comprehensive account of the importance of exports must necessarily simplify the underlying economy. Consequently, this part provides a high-level overview of exports and the framework supporting them in India. It also briefly touches on related trends in the United States, Brazil, and China.

Table 1: Export of Goods and Services: Growth, Time and Cost

	2010	2011	2012	2013	2014	2015
Export of goods and services (% growth)						
India	19.616	15.575	6.786	7.803	1.716	-5.363
China	19.302	10.431	3.334	3.857	5.408	-2.454
Brazil	11.723	4.788	0.272	2.394	-1.133	6.28
US	11.895	6.851	3.417	3.481	4.269	0.11
Time to export (days)						
India	17.0	17.0	16.0	16.0	17.1	17.1
China	21.0	21.0	21.0	21.0	21.0	21.0
Brazil	12.0	13.0	13.0	13.0	13.4	13.4
US	6.0	6.0	6.0	6.0	6.0	6.0
Cost to export ($ per container)						
India	895.0	1005.0	1045.0	1070.0	1332.0	1332.0
China	500.0	500.0	500.0	580.0	823.0	823.0
Brazil	1135.0	1650.0	2075.0	2075.0	2414.3	2322.8
US	1050.0	1050.0	1050.0	1090.0	1164.0	1224.0

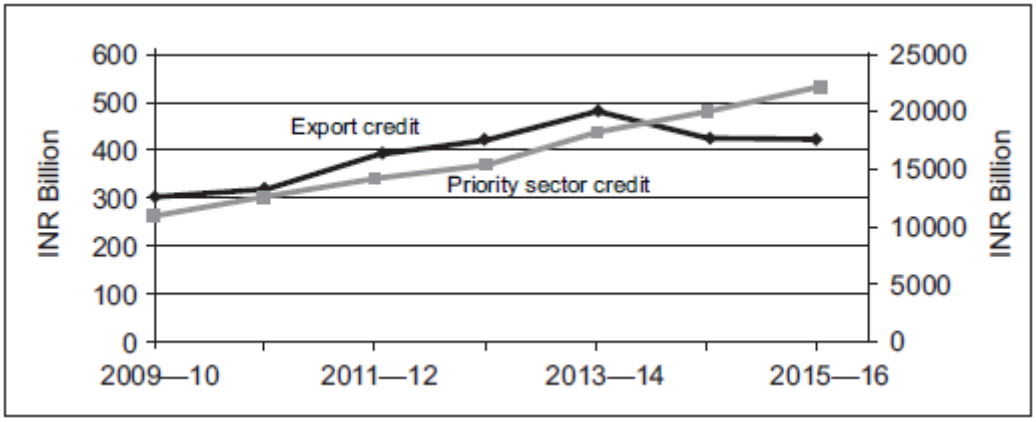
Data source: World Bank.

The first block of Table 1 displays the typical yearly increase in exports of goods and services. It demonstrates that exports slowed down throughout the sample nations. Weakness in global demand and structural weaknesses of Indian exports are cited as cyclical factors contributing to this downturn. Hoekman, for one, links it to weaker trade income

elasticity worldwide, whereas Hong et al. point the finger at the weakened position of Chinese markets that impact economies throughout the world. In addition, Krishna and Kumar state that the decline in Indian exports is the result of a lack of infrastructure and skills in the country's comparative-advantage (labor-intensive) industries, insufficient integration with global production networks, and growing real wages.

The second and third blocks provide a comprehensive overview of the expenses involved in exporting, broken down into "time to export" and "cost to export." Outside of the impact of export slowdown in recent years, a trade-off between the two factors is clearly obvious for the three developing nations under discussion. However, the example of the United States demonstrates that a nation may optimize on both factors with future growth. As a result, it's likely that India has room to significantly cut export time and cost. Figure 1 shows a similar trend in the use of institutional lending to finance exports. Agricultural, weaker-section business, micro, small, and medium-scale company, education, housing, social infrastructure, and renewable energy are just some of the sectors that stand to profit from the Government of India's priority sector loan initiative, which also prioritizes exports. Financial institutions are encouraged to allocate no less than 40% of their net bank credit adjustment to lending to certain industries. Within the priority sector, however, exports are not targeted towards a specific subset. As a consequence of the slowdown and the absence of a clear sub-target, exports have received a disproportionately small share of available credit during 2013–14.

Figure 1: Priority Sector Credit and Export Credit in India



***Data source**: Reserve Bank of India.*

Table 2: Internet Usage

	2010	2011	2012	2013	2014	2015
Internet users (% of Population)						
India	7.500	10.070	12.580	15.100	21.000	26.000
China	34.300	38.300	42.300	45.800	47.900	50.300
Brazil	40.650	45.690	48.560	51.040	54.551	59.079
US	71.690	69.729	74.700	71.400	73.000	74.452
Fixed broadband subscription (per 100 people)						
India	0.912	1.093	1.212	1.192	1.243	1.321
China	9.291	11.435	12.721	13.634	14.384	19.767
Brazil	7.223	9.055	9.625	10.661	11.676	12.248
US	27.069	28.045	29.138	30.005	30.321	31.023
Cellular mobile subscription (per 100 people)						
India	62.390	73.198	69.922	70.783	74.484	78.062
China	63.170	72.071	80.763	88.708	92.273	92.180
Brazil	100.88	119.000	125.000	135.310	138.950	126.590
US	91.312	94.440	96.010	97.078	110.200	117.590

***Data source**: World Bank.*

The demographics of internet users are summarized in Table 2. According to the data shown in the first section, internet use has skyrocketed in recent years. Between 2010 and 2015, global internet penetration rose from 16 percent to 20 percent, with much of this growth occurring on the cellular platform (third block) due to its greater flexibility in terms of location. According to the data in the table, the percentage of Indians who use the internet increased dramatically beginning in 2013. This is mostly due to the introduction of 4G wireless internet services in early 2013, about a year after they were introduced through dongles and modems.

Table 3: Descriptive Statistics of Variables with Cross-Sectional Variation

Quantitative variables	Mean	Median	SD
Export intensity	0.153	0.028	0.237
Size	4.481	4.565	2.046
Maturity	3.371	3.332	0.529
Growth opportunity	0.109	0.083	0.411
Productivity	1.084	1.126	0.298
Availability of external finance	0.540	0.552	0.196
Marketing expenditure	0.001	0.000	0.009
Distribution expenditure	0.021	0.012	0.046
Advertising expenditure	0.007	0.000	0.048
Market concentration	0.290	0.214	0.234
Relative industry revenue growth	0.039	0.023	0.317
Qualitative variables	**Percentage: yes**	**Percentage: no**	
E-commerce adoption	47.30	52.70	
Exporter decision	64.22	35.78	
Foreign ownership	11.93	88.07	
Group affiliation	35.73	64.27	

It's possible that certain companies exported in some years but not others within the sample period. This suggests that firm-years serve as the analytical unit and that the data is cross-sectional in nature. Two major obstacles arise from this design. In the first place, firm-level impacts will be permanent. Second, if it is a significant variable in explaining current exports, the estimate of delayed exports will be skewed because of its association with the fixed effects. Fixed effects may be eliminated using variable mean-difference. The dynamic panel bias, however, remains unchanged (as a result of the correlation of the lagged dependent variable with the fixed effects). If the coefficient of the lagged dependent variable is positive, as Nickell suggests, this bias will be negative. If the coefficient for lagging investment is positive, then the findings hold much more firmly. These context-specific details are ignored while describing the findings.

CONCLUSION

The export responsiveness to e-commerce is the focus of this article. The study is based on the hypothesis that entry and maintenance costs in international markets have a substantial impact on export volumes, while the low barriers to entry and maintenance offered by e-commerce motivate the study's development. However, the industry faces challenges in the form of acceptance and competitiveness. Organizational challenges, incompatibility with existing systems, and non-technical transaction costs all contribute to adoption delays. Competition, on the other hand, is hampered by the brand names, established networks, and fulfilment infrastructure of more traditional offline "brick-and-mortar" businesses, as well as the aggressive pricing and/or hostile advertising and marketing of incumbent peers. For e-commerce to have a beneficial effect on exports, businesses must see a return on investment (ROI) greater than the expense of adoption and the demands of competition.

The empirical setting looks at how much of an impact e-commerce has on export decisions and export volumes. Due consideration is given to the fact that enterprises first self-select into exporting and then determine in the second phase how much to export. Finally, in both the export decision and export intensity scenarios, an effort is made to determine whether or not there is a difference between the exports of enterprises treated with e-commerce and those not treated with e-commerce. Endogenous treatment-effects regression model is used because of the likelihood of non-random treatment selection, which makes establishing causality challenging.

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