

A Survey of Indian Express Delivery Service Providers

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Abstract

Purpose

The purpose of this paper is to present a survey of Indian express delivery service providers. The objective is to assess the current state of the Indian express sector, its dynamics, problems and opportunities for growth.

Design/Methodology

A survey questionnaire was designed and administered to 133 service providers. Data was also collected through e-mails and open-ended face-to-face and telephonic interviews. Part of the questionnaire was administered to 90 users of express services for cross-validation of responses. Secondary data was collected from published articles, industry reports and the Internet. Data collected was collated in Microsoft Excel and analyzed using the statistical package "Stata". Finally, survey findings were presented before a selected group of service providers for confirmation and validation of results.

Findings

The Indian express sector generates approximately USD 1.6 billion of revenues, growing at about 20% per annum, and employs close to 1 million people. The sector is fragmented consisting of about 2500 players with a few large players capturing about 80% of the market. Small operators are really undercapitalized and they have limited local presence offering low-end services. The survey finds that these companies perform poorly with respect to on-time delivery and reliability, breadth of services, coverage, investments in assets and information systems, and integration of services. They also accord low priority to investments in human resources. The survey addresses the issues and concerns raised by service providers such as poor airport infrastructure, cumbersome customs procedures, complex taxation systems and inordinate checkpost delays. Another major concern is the proposed postal bill that, once implemented, would make carrying letters and documents below 300 gm weight the exclusive privilege of the postal department, thereby wiping out most of the small operators and thousands of jobs. As far as the opportunities for growth are concerned, sustained GDP growth, globalization, FDI in the sector and infrastructure development stand out among the rest.

Practical implications

The survey provides significant insights to practicing managers and lawmakers into the current state of the express sector, its dynamics, problems faced and concerns raised by service providers. It is expected that the findings of the survey would help managers assess the current situation and make informed decisions in terms of allocation of scarce

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resources. On the other hand, the government is expected to take appropriate steps and introduce policies conducive to growth of express delivery services in India.

Originality/Value

The current survey presents an in-depth analysis of the Indian express sector. It is expected to benefit academicians, practitioners and policy makers.

Keywords: Survey, Courier, Express delivery, Service provider, India

Paper type: Research paper

Introduction

Express delivery services differ from ordinary mail delivery services, provided by the postal system, in terms of the values they add such as (a) door-to-door service, (b) convenient timings of pickups and deliveries, (c) guaranteed time-bound delivery, (d) reliability of service, (e) safety and security of consignments, (f) track and trace facilities for visibility of consignments during shipping, (g) proof of delivery and (h) 24×7 call centre facilities for handling of queries. Express delivery includes both documents (correspondence, business communications, bills, tenders, brochures, catalogues, manuals, annual reports, financial statements, insurance policies, certificates etc.) and non-documents (books, CDs, electronic items, credit/debit/ATM cards, samples, gifts, spare parts and other merchandise). Normally, express delivery services are characterized

is the US, generating revenues worth USD 76 billion in 2008 and accounting for 43% market share, followed by Europe and Asia-Pacific with USD 49 billion and USD 42 billion of revenues in 2008 and 28% and 24% market shares, respectively. The US, Europe and the Asia-Pacific region together control 95% of the

2004, and discuss Blue Dart's strategies in the backdrop of FDI, competition and other dynamics present in the Indian express sector. Overviews of the express markets in several developed and developing countries are, however, available in reports published by market research and consulting firms such as Oxford Economic Forecasting (2004, 2005, 2006, 2009), Datamonitor (2008), Booz Allen & Hamilton (2007), GTE (2004) and CARE (2006), which served as the background of research undertaken in the current paper.

This paper presents a survey of providers of express delivery services in India. Reference materials are collected from previous reports/surveys and case studies on India, i.e. Datamonitor (2008), CARE (2006) and Varshney and Sahay (2006). Although the above-mentioned reports present a rosy picture of the Indian express sector in terms of growth and opportunities, they also raise certain critical issues, addressed in the current survey, such as poor airport infrastructure, cumbersome customs procedures, complex taxation systems and inordinate checkpost delays as detrimental to the growth of the sector. Another contentious issue is the proposed pos

findings of the survey are expected to provide significant managerial insights into the sector for practitioners, lawmakers and other stakeholders.

The rest of the paper is organized as follows. Research objectives and methodology are presented in the subsequent sections, followed by survey results and managerial implications. The paper concludes with directions for future research.

Research objectives

The primary objective of this research was to assess the state of the Indian express sector, understand the dynamics, problems and opportunities for growth, and provide meaningful insights to practicing managers and the government into the sector. In order to fulfil this objective, a survey of Indian express delivery service providers was initiated to capture the following:

- a. respondents' demographic information
- b. respondents' perceptions of the importance levels of various key success factors and their companies' achievements with respect to these factors
- c. respondents' perceptions of their companies' achievements with respect to various performance metrics
- d. respondents' perceptions of the market size, growth rates, problems faced, including the proposed postal bill, and opportunities for growth
- e. respondents' growth strategies

In particular, the following research questions have been addressed.

- a. Are there differences in perceptions of key success factors among companies of various sizes? If so, how do the rankings of key success factors compare across companies of various sizes?
- b. Are there perceptual gaps between the importance ratings of key success factors and companies' achievements with respect to these factors? If so, what are the implications for managers of companies of various sizes?
- c. What are the dependency relationships among performance metrics and key success factors? In other words, which key success factors drive which performance metrics?

Research methodology

There were two sources of data - primary and secondary. Primary data was collected by administering a survey questionnaire and conducting open-ended face-to-face and telephonic interviews of service providers. Part of the questionnaire was also administered to users of express services for cross-validation. Secondary data was collected from publications in academic and trade journals, reports prepared by market research firms and the Internet. Variables for the survey were arrived at from previous studies and through interactions with industry sources. In perception-based questions, a 5-point scale was used where 1, 2, 3, 4 and 5 represented "very low", "low", "average",

"high" and "very high", respectively. The questionnaire was administered to about 10 service providers in a pilot study for refinement.

Since, as mentioned, the Indian express sector is fragmented, it was decided that data collected should roughly reflect the distribution of service providers of various sizes. The definition of size of a service provider was taken from the Micro, Small, Medium Enterprises (MSME) Development Act, 2006 of the Government of India (Source: http://www.laghu-udyog.com), the details of which are presented in the next section. References to prospective respondents of various sizes were obtained from industry sources. Each of them was contacted over telephone and a survey team was despatched to collect data in person to respondents, who agreed to fill in the questionnaire and give interviews. The whole process of data collection took about two months at the end of which 133 filled-in questionnaires from service providers were received, the size-wise break-up of which is available in the next section. 90 responses to selected parts of the questionnaire were also collected from users of express services. Data collected was collated using Microsoft Excel and analyzed by the statistical package "Stata". Details of the analysis are presented in the next section. Finally, the findings were presented before a selected group of service providers for confirmation and validation of results.

Survey results

Survey results are presented in the following sequence: demographic information, respondent's perceptions of key success factors, performance metrics, problems and prospects, and respondents' estimates of market size, growth rates and growth strategies.

Company size

Respondents were identified according to their sizes as defined in the Micro, Small, Medium Enterprises (MSME) Development Act, 2006 of the Government of India. The definition is in terms of investments in equipment for the service sector - Micro: Not exceeding Rs. 1 million, Small: More than Rs. 1 million but not exceeding Rs. 20 million, and Medium: More than Rs. 20 million but not exceeding Rs. 50 million. The remaining will fall in the "large" category. Figure 1 shows the distribution of respondents according to their sizes.

Insert Fig. 1 about here

It may be observed from Figure 1 that 109 out of 133 respondents, i.e. 82% belong to the micro and small categories, and the rest 18% belong to the medium and large categories.

Membership of association(s)

Respondents were asked which association(s) they were members of. Figure 2 shows the percentages of membership of association(s) for micro/small, medium and large

respectively, indicating that larger companies have more breadth of services. Figure 5

The observation from Table 1 makes it very clear that as a company grows in size, not only its international coverage increases, but also its domestic presence in terms of states/cities covered and the number of branches, offices and collection centres increases manifold. Among the companies that have international coverage, most have access to all the major regions, i.e. North America, Latin America, Europe, Middle East, Africa and Asia-Pacific. While only about 8% of them have their own set-ups abroad, about 96% have some sort of tie-ups/collaborations with foreign firms (a few of them have both own set-ups and tie-ups/collaborations with foreign firms).

Table 2 shows the various modes of operations engaged in by micro, small and medium/large courier/express companies.

Insert Table 2 about here

The notable observation from Table 2 is that companies engage more franchisees and agencies as they grow in size.

Financials

Respondents were asked to mention their net revenues in the financial years 2006-07 and 2007-08. 123 out of 133 respondents provided financial information for the two years. According to the figures obtained, the total net revenues of 123 respondents were Rs. 18.94 billion and 22.60 billion for financial years 2006-07 and 2007-08, respectively, registering an overall growth rate of 19.35%. However, since the revenue figures vary significantly across companies of different sizes, compilation of financial information based on the company size has also been done and is represented in Table 3.

Insert Table 3 about here

It may be observed from Table 4 that all companies project significant decline in growth rates in 2008-09 over the same in 2007-08 possibly due to the global recession. However, among them micro companies seem to be hit the hardest.

Figures 7-11 show the different break-ups of net revenues earned by micro, small and medium/large companies.

Following are the observations from Figures 7-11:

- As a company grows in size, the percentage of revenues earned from express, logistics and other value-added services increases. For example, medium/large companies earn more than 50% of their revenues from express and logistics while micro and small companies earn more than 90% of their revenues from courier services.
- As a company grows in size, the percentage of revenues earned from the international business also increases.
- As a company grows in size, its business with corporates and the government increases. Also, the percentage of revenues earned from non-documents increases. Medium/large companies earn more than 50% of their revenues from non-documents.
- As a company grows in size, the percentage of revenues earned from documents of higher weights increases. However, at least 70% of the document revenues for all

only 8.26% of these companies have access to bank finance; yet they face no problem in terms of working capital availability! They responded by saying that when required, they raised capital from own source, friends/relatives and private lenders/financing companies/equity investors.

Asset base

As far as vehicles are concerned, many micro/small companies reported ownership of no vehicles. Probably they use bicycles. Few use two and three wheelers and fewer have four wheelers. On the other hand, medium and large companies use more three and four wheelers, pick-up vans and trucks, and some of the really big companies have their own Only 3 (4.35%) micro companies reported having aircraft. warehouses/godowns with an average capacity of 3600 sq. ft. per respondent whereas 11 (27.5%) and 16 (66.67%) small and medium/large companies reported having their own warehouses/godowns with average capacities of 4318 and 37000 sq. ft., respectively, per respondent. When asked what other equipment they used, smaller companies responded by saying that they used computers and weighing machines. Larger companies also mentioned of computers and weighing machines, but of course in larger numbers in use. In addition, larger companies also mentioned of scanners, printers, rollers, fork lifts and GPS.

Information systems

Figure 13 shows the percentages of micro, small and medium/large companies using different kinds of information systems. Since 100% of them use telephones, it has been excluded from the figure.

Insert Fig. 13 about here

Figure 13 shows that some percentages of micro companies and substantial percentages of small and medium/large companies use EDI, bar coding and online tracking. Some percentages of medium/large companies also use RFID, GIS and GPS.

When asked about the percentage of computerization of operations, micro, small and medium/large companies reported that they had computerized 23.33%, 52.25% and 75.21% of their operations, respectively. Also, when asked about the percentage of automation of activities, merely 5 micro and small companies reported that they had automated some amount of their activities while 16 (66.67%) medium/large companies reported that they had automated, on an average, 55% of their activities.

As far as software in use is concerned, most companies responded by saying that they used proprietary software besides regular software such as MS Office and Visual Basic. Larger companies also reported using database management systems such as Oracle, FoxPro and Tally.

Respondents were also asked about their investments in information systems as percentages of total investments in 2006-07, 2007-08 and 2008-09 (projected). Their response is shown in Figure 14.

Insert Fig. 14 about here

It seems that micro, small and medium/large companies invest of the order of 4-5%, 8-9% and 19-20%, respectively, of their total investments in information systems. However, the trend shows that investments in information systems are declining for all companies probably because of the global recession.

Key success factors

Respondents were asked to rate 14 key success factors based on their perception of importance levels and company's achievements with respect to these factors. Considering respondents and factors as independent variables and importance ratings of factors as the dependent variable, a two-way ANOVA without replication showed significant differences among both respondents and factors at 5% level of significance (p-values are 2.19E-17 and 5E-181, respectively), indicating thereby significant differences in perceptions of the importance of key success factors among the respondents. Subsequently, in order to group the respondents based on similar responses, the k-means nonhierarchical cluster analysis method was applied to the data with 2, 3 and 4 possible clusters and different starting seeds. In each iteration, treating respondents and factors as independent variables and factor importance ratings as the dependent variable, a two-way

consistently ranked high by companies of all sizes. On-time delivery and reliability of service and reputation of service providers do matter irrespective of the size of the company since courier/express is a time-bound job where any sort of delay or unreliable service might result in financial, opportunity and goodwill losses. On the other hand, focus on specific industries and quality of human resources have been consistently ranked low by all companies. This is so because the need for courier/express delivery is almost uniform cutting across all industries/sectors, and hence focusing on particular industries would not help generate higher revenues and profitability especially since the characteristics of courier/express delivery do not significantly vary from industry to industry. Also, since courier/express delivery does not need any special skills, companies do not bother much about the quality of human resources. Customer relationship has been ranked medium to low by companies of all sizes probably because courier/express delivery is almost commoditized and rarely customized requiring little or even no significant customer relationship management. As stated before, the performance and reputation of courier/express companies matter in the end.

As far as dissimilarities are concerned, micro and small companies focus more on the pricing of services and extension of credit facilities than medium and large companies do, and hence have ranked these factors medium to high while the latter have consistently marked them low. Almost all micro and small courier companies belong to the unorganized sector where there is cut-throat competition leading to continuous undercutting of prices and extension of credit facilities even though these may be detrimental to the health of the company. Medium and large companies, on the other hand, have been enjoying over time stabilized business transactions with rather fixed sets of customers with almost assured volumes and hence they feel no specific need to focus on pricing of services. Door-to-door service and experience of service providers have been ranked medium to high by micro/small and medium companies while the same factors have been ranked low by large companies. Micro, small and medium companies, owing to their size and tough competition, would promise door-to-door pick-up and delivery as it might not be economically viable for them to open collection centres or employ franchisees. Large companies, of course, have a network of company-owned and franchisee collection centres besides pick-up facilities from doorsteps. The importance of the experience factor is more pronounced in relatively new companies as it has been reflected in the ratings of the factor given by micro, small and medium companies, which are supposedly relatively new, while experience does not seem to count as much for large companies for whom, again, performance and reputation matter the most.

On the other extreme, coverage, breadth of

This finding would indicate the areas where service providers need to improve and allocate scarce resources.

Performance metrics

Respondents were asked to rate 10 metrics based on their company's performance. The intention was to bring out dependency relationships among the performance metrics and key success factors treating them as dependent and independent variables, respectively. Since ratings were on an ordinal scale, normal multiple regression techniques could not be applied, which required metric data. Instead, the ordered logit (or ologit) model was applied for each dependent variable and the set of 14 independent variables. The objective was to carry out the same exercise for each of the clusters - micro & small, medium and large - as identified in the cluster analysis to bring out the differences in relationships for companies of varying sizes. However, since the populations of the clusters representing medium and large companies - 15 and 7 respectively - were insufficient to run the ologit model, it was decided to run the model for the cluster representing micro & small companies (78 observations) and the whole set of micro, small, medium and large companies (133 observations) to highlight the differences in outcomes and hence segregate the influence

appears as a significant predictor variable for revenue growth and shipment value growth for the aggregate set. There is also a negative relationship between client relation and geographic reach for Set 1 probably because of the limited geographic reach of micro & small companies. However, it is seen that client relation has been ranked medium to low by all companies though it is also seen that micro & small companies have significantly exceeded their expectations towards maintaining a long-term and collaborative client relationship. Results signify that companies may have to rethink with regard to their attitude towards client relations. Human resource appears as another significant predictor variable for the length of business relationship for both the sets whereas it also appears as a significant predictor variable for shipment value growth, customer satisfaction and customer acquisition for the aggregate set. Given the consistent low ranking of human resource as a key success factor accorded by all companies irrespective of their sizes, results should make them rethink to invest more on training and motivation of their office staff and pickup and delivery men. Industry focus, on the other hand, bears significant negative relationships with the length of business relationship and geographic reach for both the sets and also with customer acquisition for Set 1. This may be due to the reason that courier/express services are equally availed of by all industries and hence focusing on specific industries would reduce the prospects of courier/express companies, which is also reflected in the very low rank given to focus on industries by all the companies.

Breadth of services has mixed relationships for Set 1. While it has significant negative relationships with shipment value growth and ROI, it has strong positive relationships with customer acquisition. On the other hand, breadth of services has significant positive relationships with revenue growth, profit growth, shipment volume and value growth for the aggregate set. The reason behind the mixed relationships for Set 1 is that micro, small and medium companies rank breadth of services very low and also micro & small companies significantly underperform with respect to breadth of services, as has already been observed. However, since breadth of services proves to be a very significant predictor variable, micro & small companies should proactively strive to augment the breadth of their service offerings. Similarly, integration of services appears in a positive relationship with profit growth but with a negative relationship with shipment volume growth for Set 1. On the other hand, integration of services bears very strong positive relationships with revenue growth, profit growth, ROI, ROA and geographic reach for the aggregate set. It has also been observed that micro, small and medium companies not only rank integration of services very low, but also significantly underperform with

delivery and reliability appears in a positive relationship with ROA for Set 1 and bears a negative relationship with profit growth for the aggregate set. While door-to-door service has been ranked very high by micro, small and medium companies, on-time delivery and reliability has been ranked very high by all the companies. In spite of ranking on-time delivery and reliability very high, micro & small companies were found to significantly underachieve with respect to this factor, which should be a cause of concern for them and

All canonical loadings and cross-loadings were found to be significantly positive, indicating positive relationships among the dependent and independent variables. It may be observed from the above table that on-time delivery and reliability and coverage are among the most important predictor variables for micro & small companies on which significant gaps have been found between expectations and achievements of these companies. Also, considering the aggregate set, it is observed that though breadth of services, pricing, investments in assets and information systems, and integration of services appear to be important predictor variables, micro & small companies have been found significantly lagging on all these factors while medium companies have been found underperforming with respect to investment in information systems and integration of services. It is expected that these outcomes would help micro, small and medium companies take a relook at their business fundamentals and probably realign their priorities.

Problems and prospects

Respondents were given a list of 10 major issues faced by the courier/express sector and asked to rate them based on their perceived importance of these factors. The factors were subsequently ranked based on the percentage of respondents marking them "high" or "very high" separately for micro, small and medium/large companies. Table 8 shows the ranks and the corresponding percentages of respondents marking them "high" or "very high" for micro/small, medium and large companies.

Insert Table 8 about here

All companies rank bureaucracy/red tape/lengthy paperwork, inconducive/restrictive government policy/regulations and high costs of operations/low margin high to very high since these are the factors affecting the sector the most. Delay at checkposts due to sales tax compliance, non-uniform tax structure and cumbersome documentation procedure and holding up the entire consignment for an aberration only in a part of it are some of the pressing issues raised by the respondents in their comments. It is expected that modernization of checkposts, introduction of simple, easy-to-fill-in tax form

moves on from micro, small, medium to large companies. As has already been noticed, larger companies have wider domestic and international coverage, and hence are required to extensively use road/rail/airport infrastructure and customs clearance for import/export. Since there is still a lot to be done in terms of improving physical infrastructure and simplifying customs procedures, larger companies rank them comparatively higher than the other factors. As far as taxes are concerned, many of the micro and small companies belong to the unorganized sector and hence can get away without paying taxes. On the other hand, larger companies belong to the organized sector and hence they have to pay various taxes, which put them in a disadvantaged position visà-vis the unorganized players in terms of pricing of products. Therefore, larger companies rank this factor high compared to their smaller counterparts. All companies rank poor communications infrastructure and availability and quality of staff low to very low since India's communications infrastructure has improved substantially over the last few years and courier/express is more of a mundane, commoditized job that does not require special skills and unskilled labour is aplenty in the Indian market. Table 5 showed that the human resource factor was also ranked very low as a key success factor by all companies.

When asked about the proposed postal bill, almost all the respondents said that they were aware of it. When asked how the proposed postal bill would impact the sector/company and the economy as a whole, responses varied from revenues getting affected to retrenchment/unemployment to varying extents. More than 50% of micro and small companies responded by saying that they would have to close down business, and about 60% of them said that they would have to retrench staff to great extents. However, medium and large companies would be less affected because of their less dependence on document shipments. More than 86% of all

Insert Table 9 about here

All companies perceive that sustained GDP growth, at about 6-7% even at the time of recession, is the most important opportunity for the sector generating more demand for services and employment. Infrastructure development and government support and policies conducive to growth have also been marked high to very high by most of the respondents. Construction of the golden quadrilateral and North-South, East-West corridors connecting the four major metros, dedicated rail freight corridors and new airports are cases in point for infrastructure development. On the other hand, globalization, FDI in the sector and scope for upgradation to value-added services have been perceived to be less important by micro and small companies while these factors have been perceived to be moderately important and extremely important by medium and large companies, respectively. The reason may be that micro and small companies may not be very much aware of the developments in the sector or the sectors they serve are generally not affected by globalization and FDI. Moreover, as they have already mentioned, they do not have the adequate infrastructure or resources to offer more value-added services.

Estimates of market size and growth rate

When asked about the estimated size of the courier/express market, micro/small and medium/large companies provided close average estimates of Rs. 68.72 billion and Rs. 81.81 billion, respectively. Hence, the size of the market can be conservatively taken as Rs. 80 billion (~ USD 1.6 billion). About the sector's growth estimates, micro/small and medium/large companies provided average estimates of 13.21% and 16.59%, respectively, and about their own companies' growth estimates, micro/small and medium/large companies provided average estimates of 5.95% and 13.37%, respectively. These figures tally with the companies' projected net revenue growth rates in 2008-09 as shown in Table 4. From the estimates, it can be safely said that the courier/express sector is going to grow at a CAGR of 14-16% (conservative estimates) in the coming years. The conservative estimates are probably the fallout of the economic uncertainty.

Growth strategy

Respondents were asked to mention their companies' growth strategies, which is tabulated in Table 10.

Insert Table 10 about here

It is observed from Table 10 that more or less all companies resort to direct investments and alliances, and virtually no companies have mergers and acquisitions in their mind. This observation is also supported by the fact that no companies mentioned of mergers

and acquisitions as possible options to cope with the post-new postal bill situation. However, this may be a temporary phenomenon in the time of economic uncertainties. In a fragmented market like India, there are always possibilities of takeovers and acquisitions. DHL's acquisition of Blue Dart, as mentioned before and FedEx's acquisition of Prakash Airfreight Pvt. Ltd. are cases in point. It is expected that there will be more consolidation activities in the sector in future.

Implications for managers

The survey is expected to provide significant insights to practicing managers and the government into the current state of the Indian express sector, its dynamics, problems faced by the sector and opportunities for growth. Survey findings have more implications for managers of courier/express companies of relatively small size. For example, most of these companies are unorganized and not part of any associations. Even if some of them form associations, they are local in nature and do not have national presence. Therefore, their concerns are limited to discussions at the local level and are never taken up at the national level. In order to have their problems and concerns addressed at the highest level, they should sincerely look forward to memberships of pan-India associations (such

As far as the government's role is concerned, it may consider according industry status to the sector. Small, unorganized operators are heavily undercapitalized, and hence are

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Table 4: Growth rates and CAGR in net revenue during 2006/07 - 2008/09 for micro, small and medium/large companies

	Growth rate (%) in net revenue in
Company	

Table 6: Significant dependency relationships among the performance metrics and the key success factors

Micro & Small Companies (78 responses) All Companies (133 responses)

Independs)

Table 7: Significant dependent and independent variables in canonical correlation analysis

-	Micro & Small Companies	All Companies			
	(78 responses)	(133 responses)			
Canonical correlation coefficient	0.42	0.7783			
F-statistic*	1.9	2.7263			
p-value*	0.0365	0.0000			
		Revenue growth			
		Profit growth			
	DOI	Value growth			
D	ROI	ROI			
Dependent (criterion) variables	ROA	ROA			
	Geographic reach	Customer satisfaction			
		Customer acquisition			
		Geographic reach			
		Door-to-door service			
		Coverage			
		Breadth of services			
		Experience			
	Door-to-door service	Reputation			
	On-time delivery & reliability	Pricing of services			
Independent (predictor) variables	Coverage	Credit facilities			
	Reputation	Client relations			
	•	Investment in assets			
		Investment in information systems			
		Human resources			
		Integration of services			

^{*} F-statistics and p-values correspond to Wilks' lambda. Other tests, namely Pillai's trace, Lawly-Hotelling trace and Roy's largest root, were also found significant.

Table 8: Comparative rankings of issues faced by micro/small, medium and large companies

	Cluster					
	Micro & Small		Medium		Large	
Issues faced by the sector	Rank	%*	Rank	%*	Rank	%*
Inadequate airport infrastructure	7	33.94	7	53.33	1	100
Poor rail/road infrastructure	5	42.20	4	60	2	88.89
Poor communications infrastructure	9	21.10	7	53.33	10	44.44
Cumbersome customs procedure	6	39.45	4	60	5	77.78
Bureaucracy, red tape, paperwork	2	72.48	4	60	2	88.89

Table 9: Comparative rankings of opportunities for the sector as perceived by micro/small, medium and large companies

	Cluster					
	Micro &	& Small	Med	ium	Laı	rge
Opportunities for the sector	Rank	%°	Rank	%*	Rank	% *
Globalization	4	44.04	3	86.67	1	88.89
FDI allowed in the sector	6	12.84	5	66.67	1	88.89
GDP growth and increased demand	1	93.58	1	100	1	88.89
Infrastructure development	3	77.98	3	86.67	1	88.89

Figures

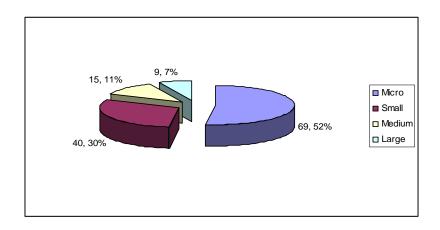


Fig. 1: Distribution of respondents according to their sizes

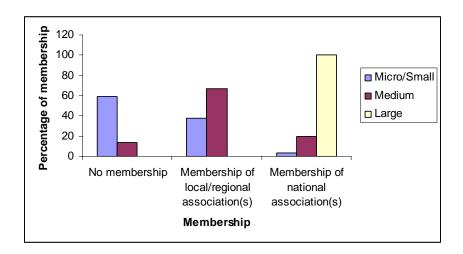


Fig. 2: Percentages of membership of associations(s) for micro/small, medium and large companies



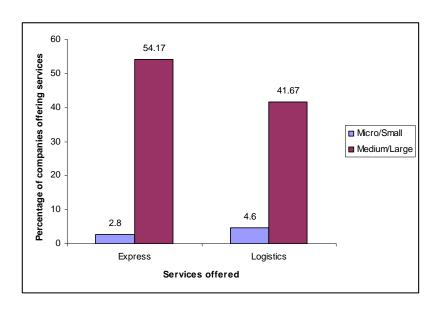


Fig. 5: Percentages of micro/small and medium/large companies offering express and logistics services

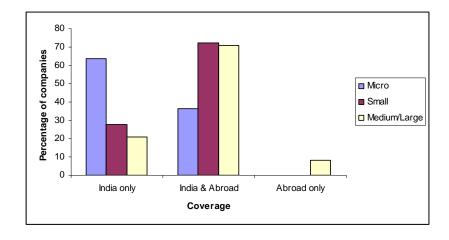


Fig. 6: Percentages of micro, small and medium/large companies having coverage in India only, India as well as abroad and abroad only

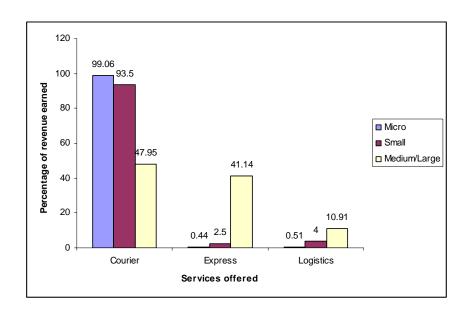


Fig. 7: Percentage of revenue earned from different services for micro, small and medium/large companies

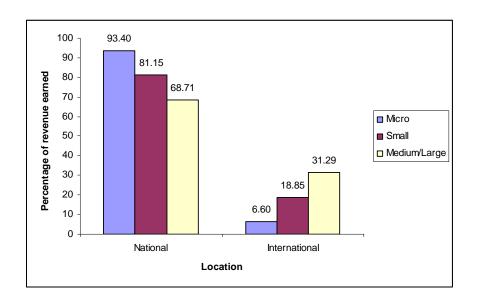


Fig. 8: Percentage of revenue earned from different locations for micro, small and medium/large companies

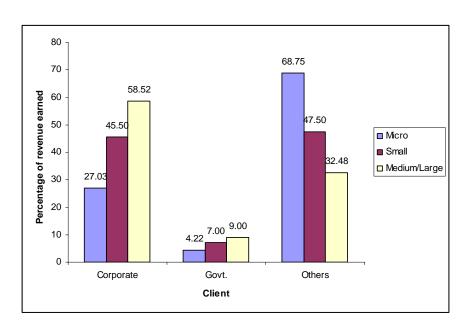


Fig. 9: Percentage of revenue earned from different clients for micro, small and medium/large companies

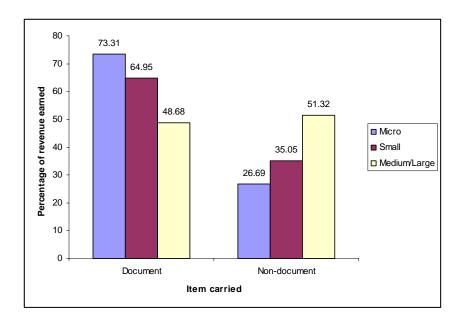


Fig. 10: Percentage of revenue earned from different items carried by micro, small and medium/large companies

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