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A Survey of Indian Express Delivery Service Providers

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A Survey of Indian Express Delivery Service Providers[1]

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 by high-value, low-volume shipments of critical, time-sensitive and perishable nature, and hence are considered as premium services vis-à-vis ordinary mail delivery services. Data shows that international air cargo, which also includes express deliveries, accounts for 5% by volume, but 35-40% by value of total international shipments in all modes (Oxford Economic Forecasting, 2009). Express companies are mostly private with postal departments in many countries also providing Express Mail Services (EMS) under the brand names of Speed Post, Business Post etc. besides ordinary mail services. However, in terms of the value-added services mentioned above, express companies score higher than the respective countries' postal departments and hence command a higher overall market share.

Express delivery services play a very significant role in a country's economy. With globalization, gradual removal of barriers to trade and shortening product life-cycles, speed of delivery and end-to-end control on shipments in transit have evolved as two most important determinants of efficiency and competitiveness of any company for which it has to rely heavily on express delivery service providers. Worldwide, express delivery services generate substantial revenues and employment. Global express revenues in 2008 were estimated at USD 175 billion, up from USD 149 billion and USD 130 billion in 2005 and 2003, respectively, growing at about 7% per annum. The four largest express companies, UPS, FedEx, DHL and TNT, also known as 'integrators' for the wide range of services provided by them, together generated revenues worth USD 125 billion in 2008, accounting for over 70% of global express revenues in 2008. The largest market 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 global express market with the Asia-Pacific region registering the highest growth rate of 9% per annum. Almost all industries use express services to varying extents. However, the major users are hi-tech manufacturing, IT/ITeS, telecommunications, pharmaceuticals, banking and financial services, automotive, engineering and retail sectors. As far as employment is concerned, it is estimated that the global express industry directly employs 1.3 million people and if indirect employment is included, the number is expected to reach 2.75 million (Oxford Economic Forecasting, 2004, 2005, 2009).

The express delivery sector in India is almost 30 years old. However, with respect to the global developments, the Indian express sector is in its infancy. The size of the Indian express market was estimated at Rs. 71 billion (~ USD 1.4 billion[2]) in 2005-06. Although the sector was growing at a CAGR of 33% in the last decade, the growth rate has since stabilized at 20-25% per annum and is expected to remain about the same in the coming years, which is still substantially higher than the annual growth rate of the global express market and opens up great opportunities for express delivery service providers. The industry is fragmented with estimated 2500 players most of which belong to the unorganized sector. Only a handful (between 20 and 30) of companies belong to the organized sector, some of which are also listed at stock exchanges, that control the majority of the market. Presently, 100% FDI is allowed in the Indian express sector. Many global players, including the four integrators UPS, FedEx, DHL and TNT, have their presence in India through wholly-owned subsidiaries, joint ventures and alliances. Since the Indian economic outlook seems promising even at the time of recession and there is a direct link between economic growth and the growth of the express business, a lot of investments and new developments are expected to happen in the Indian express sector in the near future. The Indian postal department (India Post) also provides express services through EMS capturing 13% of the express market (CARE, 2006). The sector employs close to 1 million people directly and indirectly.

The literature on the global express industry is rather limited. Kamoun and Hall (1996) compare between two alternative network designs for express delivery services in metropolitan regions in terms of improvement in efficiency through simulation studies. Ohnell and Woxenius (2003) explore the feasibility of utilizing the railways as part of multi-modal transportation systems for the European express delivery market. Related papers published in academic journals are mainly concerned with developing analytical models such as vehicle routing, multi-criteria decision-making approach for the selection of express service providers (Ding et al., 2005) and so on. Survey papers on the global express delivery market are difficult to find in academic journals. However, bits and pieces of information are available in published case studies on express service providers. Luk and Chen (2006) give an overview of the Chinese express market and discuss FedEx's expansion plans in China. Varshney and Sahay (2006) follow the developments that led to the acquisition of Blue Dart, the leading express company in India, by DHL in

[2] USD 1 ~ Rs. 50 (April-May, 2009)

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 postal bill, which, if implemented, will limit FDI to 49% in the sector, reserve 'letters' below 300 gm (or 150 gm as per updated information available) weight for India Post, require express companies to register and pay a one-time registration fee, and charge express companies 10% of their annual revenues as compensation for India Post's universal service obligations (USO) (Source: http://www.eiciindia.org). According to express companies, these steps mooted by India Post are anti-competitive and retrograde. When other sectors are gradually being liberalized and negotiations with WTO are on, limiting FDI to 49% will not only compel many foreign players to realign their equity structures, but create a negative impression about the country's FDI policy, especially when integrators UPS, FedEx and DHL are pursuing vigorous expansion plans in another Asian country, China (Armbruster, 2005). Also, it is a fact that many developed countries do provide their respective postal departments with exclusive rights to carry letters below a certain minimum weight, say 50 gm; however, they allow private express companies too to carry letters below the designated weight albeit at a price multiple, say between 2.5 and 4 times the price charged by the postal department for the minimum weight slab. In a few years' time, even these restrictions will be lifted and it will be a free market for all competitors. Registration fees and USO charges exist nowhere in the developed world. Express companies contend that while the sector contributes about USD 1.4 billion to the GDP, pays the exchequer over USD 200 million annually in the form of various taxes and generates direct and indirect employment of 1 million people, implementation of the proposed postal bill, in its current form, will surely wipe out many express companies and thousands of jobs. Considering the gravity of the issue, the current survey addresses the concern of express companies in much detail, and analyzes the situation based on data collected from and interviews given by providers and users of express services. Following are the major contributions of this paper - (a) an in-depth survey and analysis of the Indian express sector based on demographic information, (b) perceptions and rankings of key success factors, (c) performance metrics and their relations with key success factors, (d) perceptions and discussions of problems faced and opportunities for growth for the sector, and (e) estimation of the market size and growth prospects. The 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 companies. It may be observed that majority of micro/small companies have no membership, majority of medium companies are members of local/regional associations and all large companies are members of national associations such as Express Industry Council of India (EICI).

Insert Fig. 2 about here

Age and employee base

The average ages of micro, small and medium/large companies are 12.32 years, 16.3 years and 16.83 years, respectively. However, the problem is that 76 out of 109 micro and small companies, i.e. about 70% of them have not been able to grow in size despite spending 10 years or more in the business. This phenomenon probably highlights the dominance of the unorganized sector and the lack of opportunities for growth.

The average numbers of total (permanent and contractual) employees of micro, small and medium/large companies are 12.46, 31.23 and 2111.54, respectively, representing a wide gap in employment between medium/large and micro/small companies. However, the average percentages of contractual employees of the total number of employees (45.59%, 56.63% and 43.04% for micro, small and medium/large companies, respectively) remain comparable across companies of all sizes indicating the fact that the sector employs a large number from the contractual labour force. Figures 3 and 4 show the average numbers of total employees and percentages of contractual employees, respectively, for micro, small and medium/large companies.

Insert Fig. 3 and Fig. 4 about here

Services offered and industries served

Respondents were asked what services they provided among courier, express and logistics. The distinction between courier and express, however, was loosely defined. By courier, it was meant mainly low-weight, low-value, non-critical documents and low-end services whereas express meant relatively high-value, critical, time-sensitive documents and non-documents and value-added services. Logistics, of course, included transportation, warehousing, freight forwarding, customs clearance, 3PL, 4PL, supply chain management and other value-added services. It was found during the survey that many companies, large or small, did not actually distinguish between courier and express. According to them, express covers courier services. However, based on the classification used in the survey it was found that while all companies were into courier services, only 3 (2.8%) and 5 (4.6%) micro and small companies provided express and logistics services, respectively. On the other hand, the numbers of medium and large companies, who were into express and logistics services, were 13 (54.17%) and 10 (41.67%), respectively, indicating that larger companies have more breadth of services. Figure 5 shows the percentages of micro/small and medium/large companies offering express and logistics services.

Insert Fig. 5 about here

Respondents were also asked to list the top three industries/sectors in terms of revenue earnings. Though courier/express services are availed of more or less by all the industries/sectors, the most mentioned industries/sectors were IT/ITeS, textiles/garments, pharmaceuticals, industrial/engineering, banks and financial institutions, retail and automotive. The survey of users of courier/express services from the above-mentioned sectors reveals that 60% of them do not use India Post at all and the majority of 40%, who use India Post, use it only for letters and documents. Users mention that courier/express services help them meet delivery schedules, increase sales, reduce cost of operations and improve efficiency.

Geographic coverage

Among the micro companies, 44 (63.77%) have services limited to India only while the rest 25 (36.23%) cover India and abroad. 11 small companies (27.5%) cover only India while the rest 29 small companies (72.5%) have coverage in India as well as abroad. On the other hand, among the medium and large companies, 5 (20.83%) cater to India only, 17 (70.83%) cover both India and abroad, and 2 companies (8.33%) have only international coverage. The data shows that as a company grows in size, its international coverage also increases. Figure 6 shows the percentages of micro, small and medium/large companies having coverage in India only, India as well as abroad and abroad only.

Insert Fig. 6 about here

Within India, the pattern of coverage is the same for all companies irrespective of sizes. North, South, East and West zones are covered by most of the companies, followed by Central India and North East. Overall, about 90% of the companies cover North, South, East and West zones while about 71% and 64% cover Central India and North East, respectively, as well. Table 1 shows the average numbers of states/cities covered, branches, offices and collection centres including franchisee outlets for micro, small and medium/large companies.

Insert Table 1 about here

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 is observed from the data that though medium and large companies constituted only 13.82% of the companies which provided financial information, they contributed 76.14% of the total net revenues generated by all respondent companies in 2007-08. This shows the fragmented nature of the Indian courier/express sector.

Respondents were also asked to provide projected net revenue figures for the year 2008-09. 107 Respondents provided this information. Table 4 shows the growth rates in 2007-08 and 2008-09 (projected) and CAGR (projected) over the period 2006/07 – 2008/09 for such 107 micro, small and medium/large companies.

Insert Table 4 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.

Insert Fig. 7, Fig. 8, Fig. 9, Fig. 10 and Fig. 11 about here

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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 companies come from documents below 150 gm weight. Hence, if the proposed postal bill stipulates that carrying documents below 150 gm weight is the exclusive privilege of India Post, all companies irrespective of size will certainly be hit to varying extents with micro and small companies being hit the hardest losing more than 50% of their overall revenues.

Respondents were asked whether their clients paid on time and if not, what the average delay in payments was. Figure 12 shows that the trend is the same across companies of all sizes. About 50% of their clients pay on time. Clients, who delay in making payments, settle their accounts in 5.32, 6 and 3.38 weeks, on an average, for micro/small, medium and large companies, respectively.

Insert Fig. 12 about here

When asked whether they had adequate working capital, almost 100% of the respondents said yes. On the contrary, when asked whether they had access to bank finance, only 8.26% of micro/small companies responded positively while 33.33% and 66.67% of medium and large companies, respectively, said yes. This observation is worth noting in the sense that more than 50% of micro/small companies' clients do not pay on time and 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 aircraft. Only 3 (4.35%) micro companies reported having their own 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 ANOVA without replication was performed to check if there were significant differences among respondents and factors at 5% level of significance. After several iterations and excluding outliers, it was possible to come out with 3 meaningful stable clusters where there were significant differences between clusters but so significant differences among respondents within clusters. It was observed that respondents could be grouped according to their sizes - micro and small (78 observations, p-value = 0.1087), medium (15 observations, p-value = 0.3404) and large (7 observations, p-value = 0.0686). In order to observe how respondents belonging to different clusters view the importance of key success factors, the percentage of responses marking each factor "high" or "very high" in each cluster was determined and factors were ranked accordingly. Table 5 shows the ranks of factors and the corresponding percentages for different clusters, i.e. micro/small, medium and large companies.

Insert Table 5 about here

It is seen from Table 5 that on-time delivery and reliability and reputation of service providers are the most unambiguous and important key success factors as they have been 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 service offerings, investment in assets, investment in information systems and integration of services have all been ranked low-medium to very low by micro/small and medium companies while the same factors have been ranked very high by large companies. Micro, small and medium companies, owing to their size and shortage of funds, cover mostly local and regional areas, offer limited services, have limited investments in assets and information systems, and have limited or no opportunities of integration of services. Large companies, on the other hand, naturally very highly rate these factors, who have already established national/international networks, have been offering value-added services such as transportation, warehousing, freight forwarding, customs clearance besides courier/express, have heavily invested in information systems and assets such as vehicles, warehouses and material handling equipment, and have already integrated or are in the process of integrating courier/express services with other value-added logistics and supply chain services offered by them. It is expected that micro, small and medium companies in their transition to becoming large companies would gradually shift their focus to these factors.

Next, for each cluster, the differences between respondents' company ratings and importance ratings for factors are computed to verify if these differences are significant at 5% level of significance. For micro and small companies, it is found that these companies are significantly underperforming as per their expectations with respect to on-time delivery and reliability, coverage, breadth of service offerings, pricing of services, investment in assets, investment in information systems and integration of services. This result is significant in the light that though on-time delivery and reliability, coverage and pricing of services have been ranked medium-high to very high by these companies, their achievements with respect to these factors have not been on a par. Also, as stated before, as these companies strive to become large players, they have to focus more on breadth of service offerings, investment in assets, investment in information systems and integration of services on which these companies were again found lagging far behind. The only areas where these companies have significantly over-performed are focus on specific industries and customer relationships, which anyway have been ranked low to very low by them. For the remaining factors, the differences are not found significant on either direction meaning therefore that they have been able to perform to expectations with respect to these factors.

Medium companies, on the other hand, are significantly underperforming with respect to investment in information systems and integration of services. While investment in information systems has been ranked medium by them, the achievement has been poor, and as they progress to become large players, they have to focus more on integration of services. The only factor for which significant over-achievement is observed is experience. With respect to the rest of the factors, the differences have not been significant on either direction indicating that they have performed to their expectations. Finally, for large companies, it has been found that they have been able to perform to their expectations with respect to all the factors, and for experience, pricing of services and extension of credit facilities, they have actually significantly over-performed. This result is obvious since large companies do not lay much emphasis on these factors as evident from their rankings; however, they do have experience and for doing business, they have to resort to competitive pricing and extend credit facilities to their customers.

The survey of users of courier/express services revealed that they put much emphasis on on-time delivery and reliability, door-to-door service, investment in information systems, experience and reputation, coverage, and competitive pricing and extension of credit facilities. However, the gap analysis showed that their service providers significantly underperformed with respect to on-time delivery and reliability, investment in information systems, coverage, competitive pricing and extension of credit facilities, in addition to breadth of services, quality of human resources and integration of services.

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 of medium and large companies. Table 6 shows the statistically significant (at 5% level of significance) independent variables for an overall model fit, types of relationships and p-values against each performance metric for micro & small companies and all companies irrespective of their sizes.

Insert Table 6 about here

It may be observed from Table 6 that there are many similarities and dissimilarities between the outcomes for micro & small companies (Set 1) and all companies (aggregate set). Coverage seems to be one of the most important predictor variables appearing for ROI and geographic reach for both the sets and for revenue growth, profit growth, ROA and customer acquisition for the aggregate set. However, it has been seen earlier that coverage has been ranked medium as a key success factor by micro, small and medium companies, and also for micro & small companies the gap between expectations and achievements with respect to coverage is significant, indicating that these companies have insufficient coverage and should focus more on increasing coverage. Experience appears as another important predictor variable for customer acquisition for both the sets. However, for Set 1 experience also bears a negative relationship with profit growth. This may be due to two reasons - (a) micro & small companies are relatively young and hence have rated themselves low in experience, and (b) as a company ages and gains experience, the growth rate gradually tapers off and even declines, and this phenomenon is common for every sector and not specific to the courier/express sector. Reputation appears as an important predictor variable for geographic reach for Set 1 and customer satisfaction for the aggregate set justifying the very high rating accorded to reputation by companies of all sizes. Client relation appears as a significant predictor variable for customer acquisition and length of business relationship for both the sets whereas it also 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 respect to integration of services. However, these companies need to focus more on integration along with increase in the breadth of services. Investment in assets, on the other hand, appears in a negative relationship with customer satisfaction for Set 1 while the same factor bears a positive relationship with geographic reach for the aggregate set. Here also, micro, small and medium companies rank investment in assets very low and in addition, micro & small companies significantly underperform with respect to investment in assets. However, as has already been noted, these companies have to focus on investment in assets in order to grow in size.

Among the remaining factors, door-to-door service appears in mixed relationships for Set 1 while this is absent in any of the relationships for the aggregate set, and on-time 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 every effort should be put in to overcome this deficiency. Pricing of services appears in a negative relationship with revenue growth for Set 1 while it is absent in any of the relationships for the aggregate set. Extension of credit facilities, on the other hand, appears in a positive relationship with customer satisfaction for the aggregate set while this is absent in any of the relationships for Set 1. As already mentioned, since there is cut-throat competition among micro & small companies, these companies always resort to undercutting of prices for volumes and hence the negative relationship with revenue growth. However, again, micro & small companies were found to be lagging far behind with respect to meeting their expectations towards pricing of their services. Investment in information systems does not appear in any of the relationships for Set 1 while it appears in positive and negative relationships with shipment volume growth and customer satisfaction, respectively, for the aggregate set. It has been seen that micro, small and medium companies have ranked investment in information systems medium to low; also, the gaps between expectations and achievements with respect to investment in information systems for these companies have been significant. It is expected that micro, small and medium companies will lay more emphasis on information systems in order to move towards becoming large companies.

To check the effect of company size on the ologit results mentioned above, a dummy variable named ‘size’ was introduced and the ologit model was again run for each performance metric for the aggregate set. It was found that ‘size’ appeared as an important predictor variable for revenue growth, profit growth, shipment volume and value growth, ROI and ROA with other predictor variables as shown in Table 6. Hence it may be inferred that as far as financials and shipment volumes are concerned, the size of a company does matter.

In the ologit model, the dependent variables were taken one at a time and their relationships with independent variables were established on an individual basis. Therefore, a composite relationship among all the dependent and independent variables was not available. In order to overcome this deficiency, a canonical correlation analysis was also performed which considered all dependent and independent variables simultaneously and established an overall dependency relationship. Using various combinations of pairs of linear composites from the criterion (dependent) and predictor (independent) variables, a pair was found to be maximally correlated at 5% level of significance for each of Set 1 and the aggregate set. Table 7 shows the canonical correlation coefficient, F-statistic, p-value and significant dependent and independent variables for each set.

Insert Table 7 about here

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 forms, abolition of octroi[3] and implementation of a uniform Value Added Tax (VAT) structure across all states would do away with most of these problems. Corruption and bribery at government offices and on roads affect micro, small and medium companies the maximum while they also affect large companies to a considerable extent. Respondents commented that the government should put in more effort in terms of increasing the number of vigilance staff and conducting surprise checks to reduce corruption levels which would not only eliminate delays, but also ensure higher margins for courier/express companies. Factors such as inadequate airport infrastructure, poor rail/road infrastructure, lengthy and cumbersome customs procedure and numerous taxes making pricing uncompetitive have been ranked high to very high by a gradually increasing number of respondents as one

[3] a form of tax levied by the local authority

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 vis-à-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 companies apprehended that there would be huge unemployment in the economy that would give rise to anti-social activities. No one mentioned of mergers and acquisitions. When asked how they would cope with the situation if they stuck to the business, responses varied from raising the minimum weight of documents carried beyond 150 gm/300 gm, convincing clients to pay more for their services and acquiring new clients to make up for the lost business to closing down unprofitable destinations, shifting to non-document business and starting a new line of business. However, except large companies, micro, small and medium companies did not mention if they had plans to foray into logistics and other value-added services.

Introduction of the proposed postal bill would also impact users of express services as the users surveyed mentioned that as much as 86% of their shipments weighed below 150 gm and if they were subjected to use India Post for letters and documents below 150 gm weight, speed of delivery and reliability of service would be seriously affected. About 80% of them also mentioned that they would continue using private courier/express services despite the proposed postal bill coming into effect.

With respect to opportunities for the sector, respondents were handed out a list and asked to rate them based on their perceived importance levels. Table 9 shows the ranks of listed opportunities/prospects and the corresponding percentages of respondents marking them "high" or "very high" for micro, small, medium and large companies

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 Express Industry Council of India or EICI) and industry bodies (such as Confederation of Indian Industries or CII and different Chambers of Commerce).

Smaller companies derive a substantial portion of their revenues from low-end courier services. In order to grow, they have to provide more value-added express and logistics services, and increase the share of high-value, time-critical non-document revenues, especially in the context of the proposed postal bill. Also, these companies have to expand their presence from the local level to the national level, and then to the global level, through engagement of franchisees/agencies and infusion of capital into their own network. They will also need to increase the level of computerization and automation of activities, and investments in information systems not only to reduce paperwork and costs, but also to improve efficiency and response time (Peel, 1995). The survey finds significant gaps in performance of these companies with respect to on-time delivery and reliability, coverage, breadth of services, investments in assets and information systems, and integration of services, which has also been confirmed by the survey of users of courier/express services, and hence has to be seriously looked into by the managements of these companies.

The survey also finds that companies irrespective of size do not lay much emphasis on investments in human resources, which is also reflected in the low ranking of human resources given by them. This is probably due to the perception that courier/express is a low-end service that does not require skilled manpower. However, the survey finds human resources as an important predictor variable as far as company performance is concerned. Also, as companies move ahead to provide more value-added logistics and supply chain management services, skilled professionals become a must. Therefore, companies should have a proper human resource management plan in place and invest in recruiting, training motivating and retaining management talent.

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 incapable of investing in infrastructure. Whenever they need capital, they organize it through private financing, often with much difficulty. If the sector gets industry status, these companies would have easy access to capital from banks and financial institutions. As discussed before, the government should invest more to improve airport infrastructure, simplify customs procedures and taxation systems, eliminate bureaucracy and red tape, and overall facilitate express delivery because the sector not only contributes to the economy and the exchequer, but provides employment to close to 1 million people. With the same arguments, the government should also not introduce the proposed postal bill in its present form. There should be no FDI limit in the sector, no registration fees and no USO charges as these are non-existent in any developed country, and introducing them would project India in a poor light as an investment destination. The government may reserve letters below 150 gm weight for India Post, but should also allow express companies to operate in this weight slab with premium charging and keep EMS, which is a competitor of private courier/express companies, out of the purview of this regulation. Otherwise, as the survey finds, most of the small operators will be wiped out and thousands of jobs will be lost, which the government would not want.

Conclusion and direction for future research

This paper presents an in-depth survey of Indian express delivery service providers in terms of demographics, success factors, performance metrics, problems faced and opportunities for growth. The survey not only provides an up-to-date state of the express sector, but addresses some important issues and concerns raised by express service providers for lawmakers. It is expected that the survey would help practicing managers make informed decisions in terms of allocation of scarce resources and guide the government in drafting policies conducive to growth of express delivery services in India.

This paper presents an exploratory study of Indian express companies. Future studies may focus on more in-depth case studies and theory development. Comparisons with the express markets of the US, EU, China and other countries may be made for benchmarking and having a global perspective. Industry-specific surveys may also be carried out to understand the differences in characteristics in terms of requirements of express delivery services. Finally, more extensive longitudinal studies are required including both providers and users of express services to track the changes in the sector as well as get the views from both sides.

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Tables

Table 1: Average numbers of states/cities covered, branches, offices and collection centres for micro, small and medium/large companies

Company Size	Average number of				
	States covered	Cities covered	Branches	Offices	Collection Centres
Micro	10.85	35.47	0.90	1.21	2.78
Small	14.05	64.90	5.78	6.08	20.60
Medium/Large	19.85	153.72	250.95	53.88	400.40

Table 2: Percentages of micro, small and medium/large companies engaged in various modes of operations

Company Size	Percentage of companies engaged in			
	Own Network	Franchisees	Tie-ups/ Alliances	Agency
Micro	97.10	4.35	88.41	0
Small	100	35	90	0
Medium/Large	91.67	62.50	79.17	12.50

Note: Total percentage may exceed 100 since companies may engage in more than one mode of operations

Table 3: Average net revenues and growth rates of micro, small and medium/large companies

Company size	Average net revenue (Rs. million) in		Growth rate (%) in 2007-08 over 2006-07
	2006-07	2007-08	
Micro	4.9	5.8	18.48
Small	111.1	125.2	12.64
Medium/Large	833.3	1012.2	21.47
Overall	153.9	183.7	19.35

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

Company size	Growth rate (%) in net revenue in		
	2007-08	2008-09 (projected)	2006/07 – 2008/09 (projected CAGR)
Micro	18.78	4.63	11.48
Small	12.43	7.23	9.8
Medium/Large	21.71	14.27	17.93
Overall	19.82	12.79	16.25

Table 5: Comparative rankings of key success factors among micro, small, medium and large companies

	Cluster					
	Micro & Small		Medium		Large	
No. of observations	78		15		7	
Key Success Factor	Rank	%*	Rank	%*	Rank	%*
Door-to-door service	1	97.44	1	100	8	85.71
On-time delivery & reliability	1	97.44	2	93.33	1	100
Coverage (National/International)	6	55.13	7	80	1	100
Breadth of service offerings	11	15.38	9	60	1	100
Focus on specific industries	12	11.54	14	6.67	13	57.14
Experience of service provider	5	88.46	2	93.33	11	71.43
Reputation of service provider	3	93.59	2	93.33	1	100
Competitive pricing of services	4	92.31	8	73.33	8	85.71
Extension of credit facilities	6	55.13	12	40	14	28.57
Relationship with customers	8	53.85	5	86.67	8	85.71
Investment in assets	12	11.54	11	46.67	1	100
Investment in information system	9	38.46	5	86.67	1	100
Quality of human resources	9	38.46	10	53.33	11	71.43
Integration of services	14	5.13	13	26.67	1	100

* % of responses which marked either "high" or "very high" on factor importance ratings

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

Performance metrics	Micro & Small Companies (78 responses)			All Companies (133 responses)		
	Independent variable	Type of relationship	p-value	Independent variable	Type of relationship	p-value
Revenue growth	Pricing of services	-	0.013	Coverage	+	0.007
				Breadth of services	+	0.028
				Client relations	+	0.034
				Integration of services	+	0.005
Profit growth	Experience	-	0.012	On-time delivery	-	0.029
				Coverage	+	0.029
				Breadth of services	+	0.027
	Integration of services	+	0.008	Integration of services	+	0.000
Shipment volume growth	Door-to-door service	+	0.039	Breadth of services	+	0.001
	Integration of services	-	0.019	Investment in information systems	+	0.002
Shipment value growth	Door-to-door service	-	0.007	Breadth of services	+	0.024
				Client relations	+	0.001
	Breadth of services	-	0.006	Human resources	+	0.003
Return on Investments (ROI)	Door-to-door service	+	0.010	Coverage	+	0.000
	Coverage	+	0.025	Integration of services	+	0.001
	Breadth of services	-	0.045			
Return on Assets (ROA)	On-time delivery	+	0.048	Coverage	+	0.001
				Integration of services	+	0.002
Customer satisfaction	Client relations	+	0.006	Reputation	+	0.015
	Investment in assets	-	0.030	Credit facilities	+	0.021
				Client relations	+	0.039
				Investment in information systems	-	0.046
				Human resources	+	0.023
Business relationship	Industry focus	-	0.015	Industry focus	-	0.019
	Client relations	+	0.002	Client relations	+	0.000
	Human resources	+	0.005	Human resources	+	0.000
Customer acquisition	Breadth of services	+	0.009	Coverage	+	0.000
	Industry focus	-	0.015	Experience	+	0.000
	Experience	+	0.015	Human resources	+	0.003
Geographic reach	Coverage	+	0.005	Coverage	+	0.001
	Industry focus	-	0.004	Industry focus	-	0.003
	Reputation	+	0.038	Investment in assets	+	0.001
	Client relations	-	0.006	Integration of services	+	0.000

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

	Micro & Small Companies (78 responses)	All Companies (133 responses)
Canonical correlation coefficient	0.42	0.7783
F-statistic*	1.9	2.7263
p-value*	0.0365	0.0000
Dependent (criterion) variables	ROI ROA Geographic reach	Revenue growth Profit growth Value growth ROI ROA Customer satisfaction Customer acquisition Geographic reach
Independent (predictor) variables	Door-to-door service On-time delivery & reliability Coverage Reputation	Door-to-door service Coverage Breadth of services Experience Reputation Pricing of services Credit facilities 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
Corruption at offices and on roads	1	80.73	1	80	7	66.67
Inconducive government policy	4	65.14	2	66.67	2	88.89
High costs of operations/low margin	3	70.64	2	66.67	5	77.78
Various taxes making pricing high	8	27.52	9	40	7	66.67
Availability and quality of staff	10	13.76	10	26.67	9	55.56

* % of responses which marked either "high" or "very high" on factor importance ratings

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

	Cluster					
	Micro & Small		Medium		Large	
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
Government support	2	88.99	1	100	6	77.89
Scope for upgradation	5	22.02	6	60	1	88.89

* % of responses which marked either "high" or "very high" on factor importance ratings

Table 10: Percentages of respondents mentioning their companies' growth strategies

Company size	Growth strategy			
	Direct investments	**Mergers**	**Acquisitions**	**Alliances**
Micro & Small	72.48%	-	-	56.88%
Medium	73.33%	-	6.67%	53.33%
Large	88.89%	-	-	55.56%

Figures

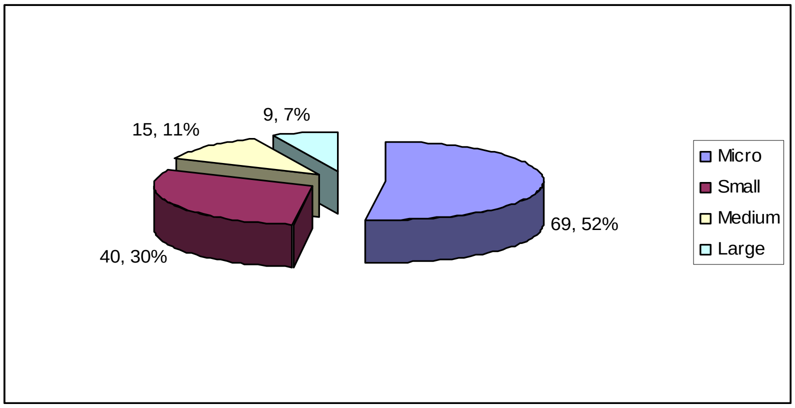

Fig. 1: Distribution of respondents according to their sizes

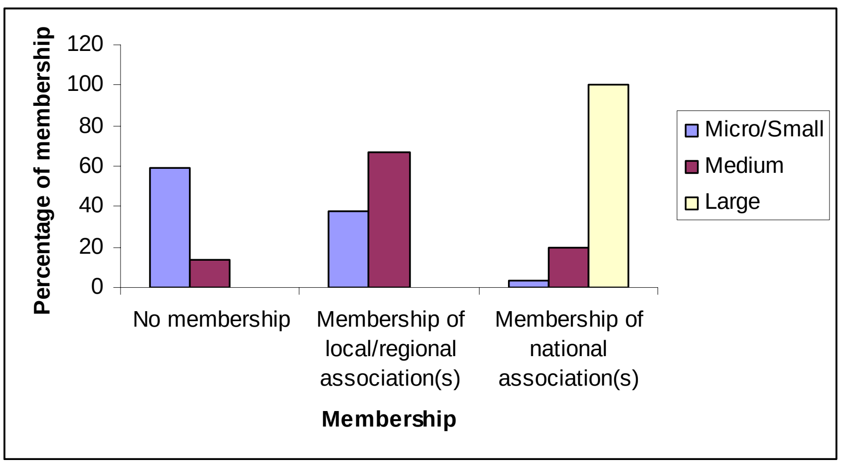

Fig. 2: Percentages of membership of associations(s) for micro/small, medium and large companies

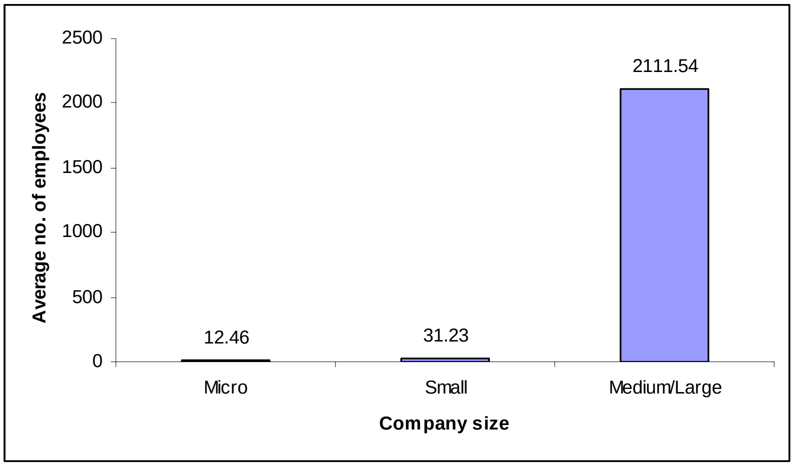

Fig. 3: Average numbers of employees of micro, small and medium/large companies

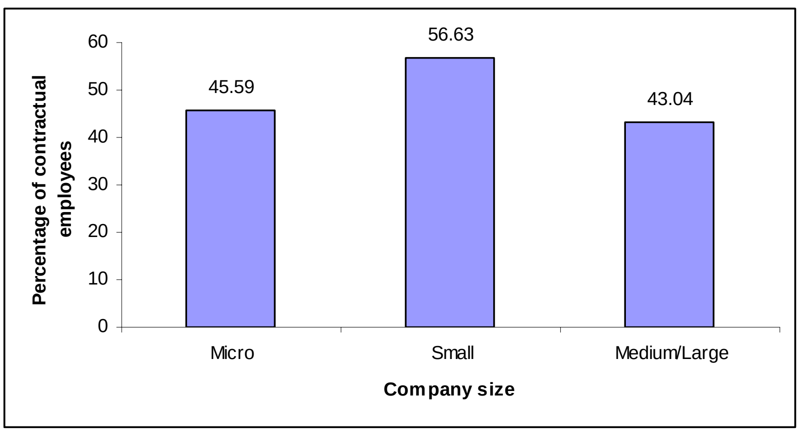

Fig. 4: Percentages of contractual employees of micro, small, medium/large companies

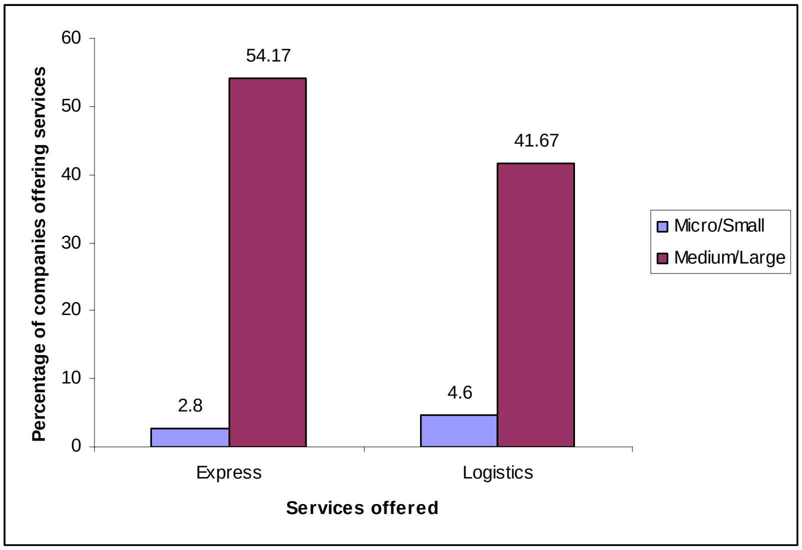

Fig. 5: Percentages of micro/small and medium/large companies offering express and logistics services

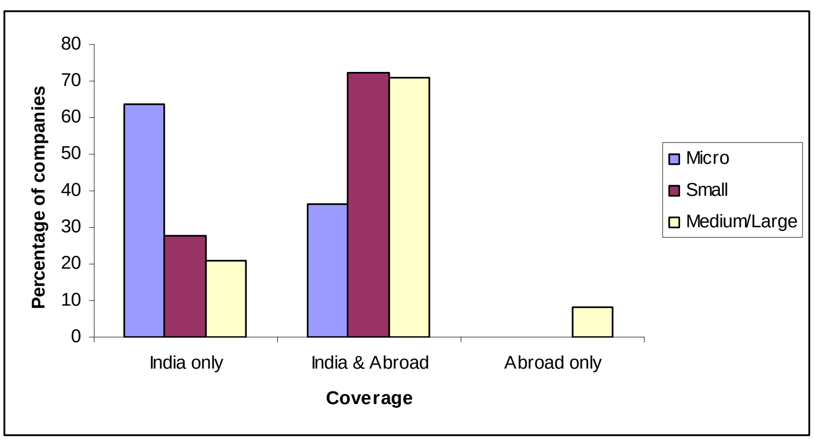

Fig. 6: Percentages of micro, small and medium/large companies having coverage in India only, India as well as abroad and abroad only

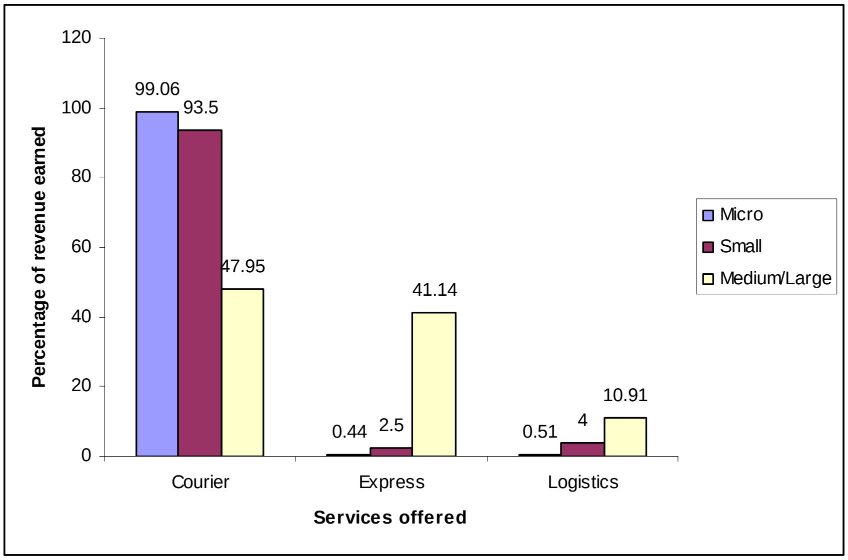

Fig. 7: Percentage of revenue earned from different services for micro, small and medium/large companies

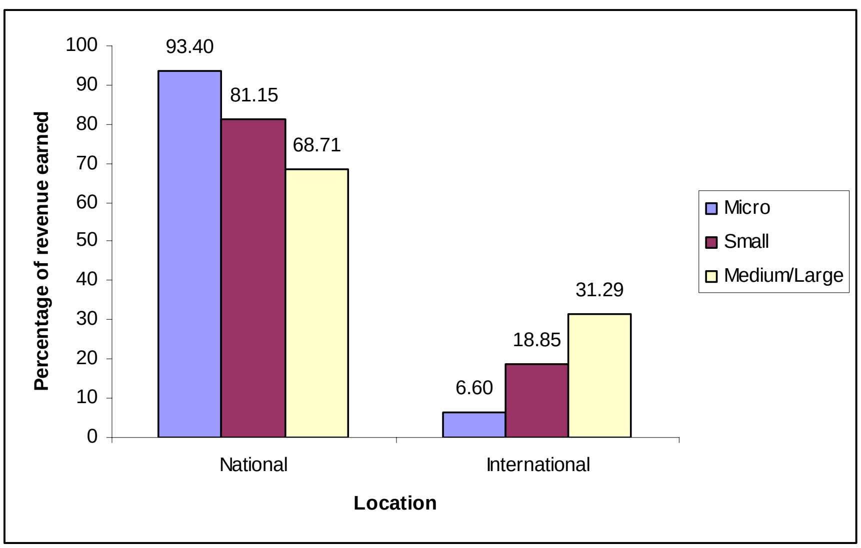

Fig. 8: Percentage of revenue earned from different locations for micro, small and medium/large companies

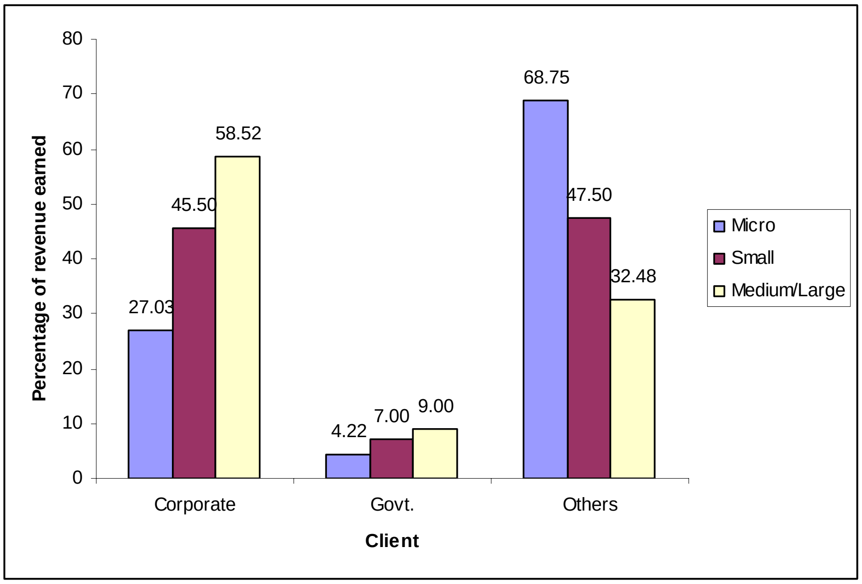

Fig. 9: Percentage of revenue earned from different clients for micro, small and medium/large companies

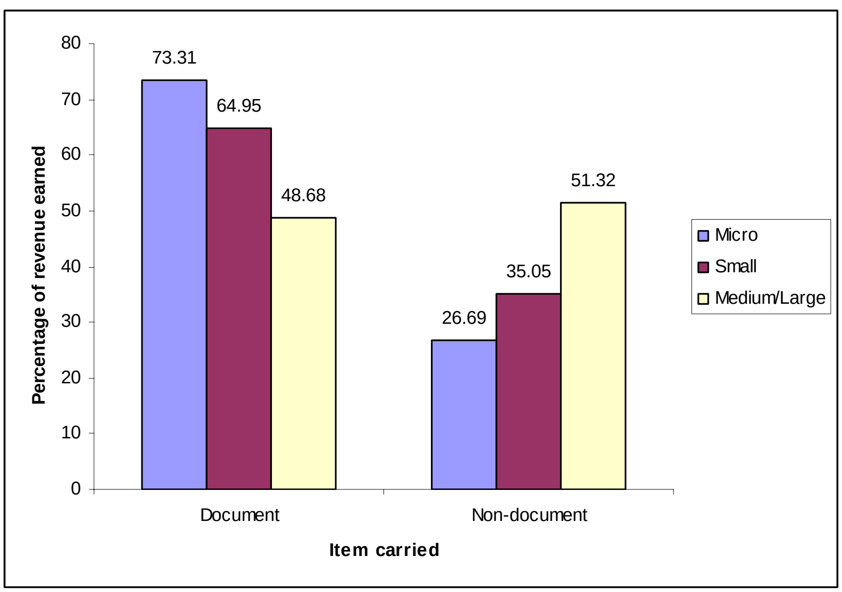

Fig. 10: Percentage of revenue earned from different items carried by micro, small and medium/large companies

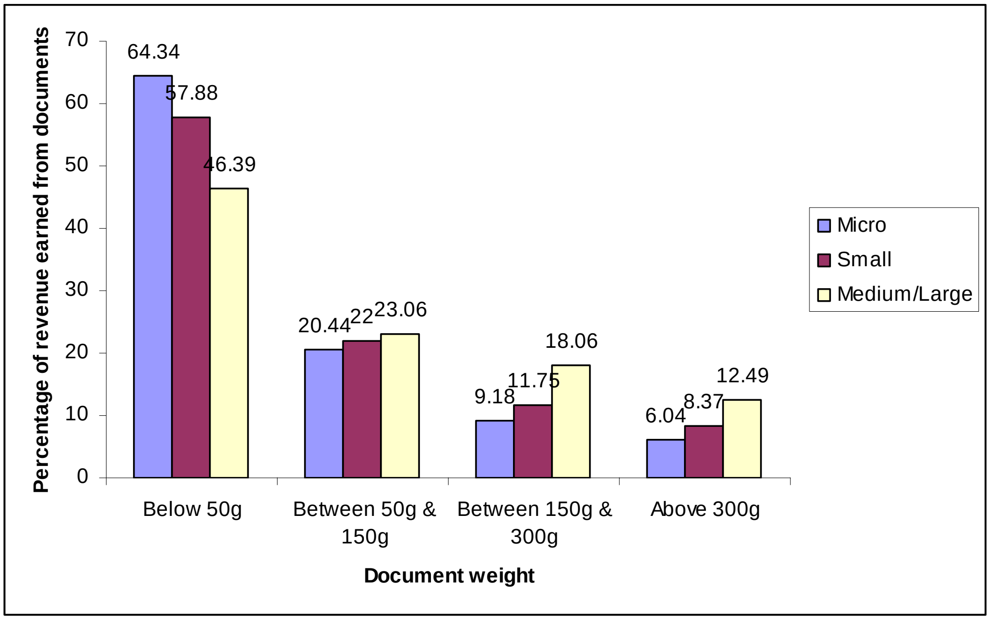

Fig. 11: Percentage of revenue earned from documents of different weights for micro, small and medium/large companies

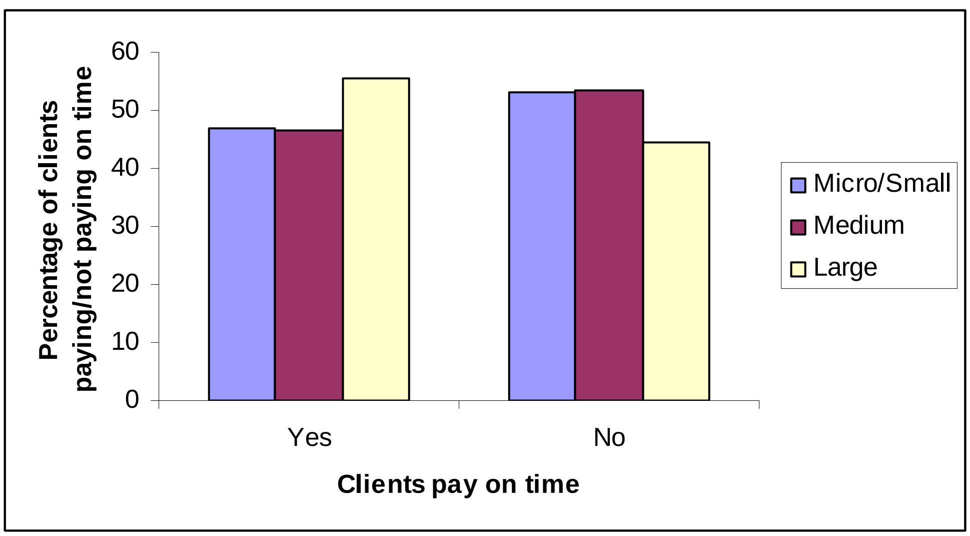

Fig. 12: Percentages of clients paying/not paying on time for micro/small, medium and large companies

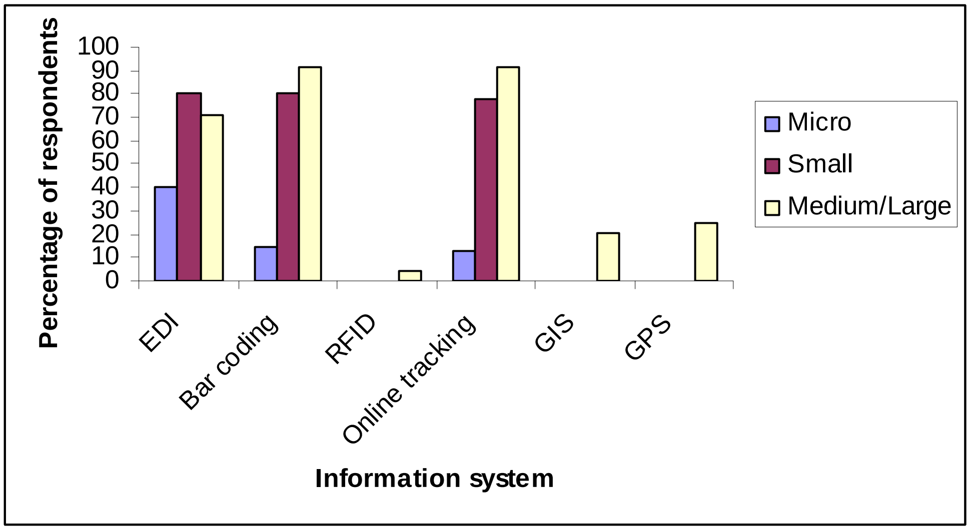

Fig. 13: Percentages of respondents using different information systems for micro, small and medium/large companies

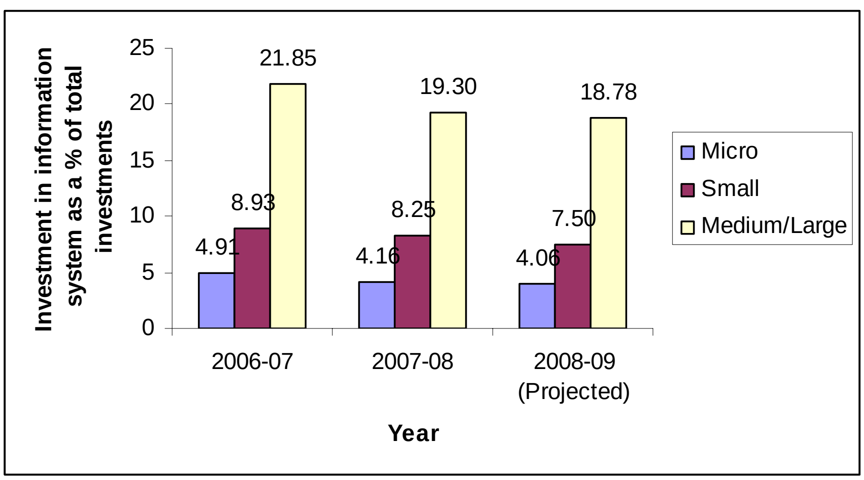

Fig. 14: Investment in information system as a % of total investments in 2006-07, 2007-08 and 2008-09 (projected) for micro, small and medium/large companies