

Strength of Social Ties in Local Labour Market of Kolkata

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***Abstract:** In a world where labour market participants are not anonymous, social networks often play a major part in shaping labour market outcomes. Labour economists have long recognized that social networks play a very important role in shaping labour markets outcomes. Job-seekers often use their personal contacts to get employment-related information or job referrals. This paper provides an example, where workers use social ties to exchange employment information, in the context of the urban formal labour market in Kolkata. Workers are mainly employed in the healthcare sector, IT sector, data analysts, and in other service sectors, including banking sector, education (non-teaching) of Kolkata. The paper finds that a significant percentage of the workers irrespective of their age and gender, hears about the job vacancy through personal connections. This paper further finds that friendship ties are mainly used for searching jobs. Most of the workers hear about the job vacancies from their friends or acquaintances. The paper also finds that a worker, who is a newcomer in the labour market, is likely to get information through one of his direct ties rather than indirect ties. However, indirect ties are important for the workers who change their companies on a regular interval. Moreover, workers hear about employment information from both strong ties and weak ties. The paper also finds the empirical support of evolution of a triad.*

Keywords: Social networks, social ties, employment information, labour market.

Introduction

In a world where labour market participants are not anonymous, social networks often play a major role in shaping labour market outcomes. Labour economists have long recognized that social networks play a very crucial role in shaping labour market outcomes. Labour market participants often use their personal connections, friendship ties or family ties, to get employment information or employee referrals (Calvo- Armengol, 2001, Calvo- Armengol and Jackson 2004, Goyal 2007¹)². In this context, social

networks act as an alternative source of employment information, where information diffuses through the networks. This coexists with the formal source of employment information, e.g., advertisement in newspapers. The presence of networks reduces the search cost to find a job. In a similar manner, it reduces the cost of hiring too; researchers argue that employee referrals act as a helpful device for screening job applicants (Montgomery 1991). It plays a prominent role in matching job-seekers with vacancies within a short time. The presence of social networks increases the chances of getting a job even when there is a low probability of getting a job or when there is a downturn in the labour market. Hence, social networks play a determining role in shaping labour market outcomes.

Here, what happens is information spreads through word-of-mouth communication (Calvo-Armengol 2001) among the members of a network. In general, the information that a network member has is not communicated and extended to a non-networked person. In this context, a network is a club good where benefits are restricted to the members only. However, it may happen that one member of a network does not know another member of the same network directly, gets to know about him indirectly, i.e., through friends of friends. Sometimes, information comes from indirect links, i.e., from friends of friends of friends. It implies that the presence of indirect links generates a positive network externality in the labour market. However, a tie can be strong or weak and the quality and diffusion of information may depend on the strength of a tie. If information comes through a strong direct tie then one can get assured about the quality and the quick diffusion of information. However, the literature on the strength of a tie and information diffusion is divided into two groups. One group has found empirical support in the favour of strong ties and the other group has advocated for weak ties.

Granovetter (1973, 1974, and 1983) in his seminal papers has argued that job seekers hear about job vacancies through weak social ties rather than strong social ties and job seekers are matched to jobs more frequently through weak ties rather than strong ties. He has named it as the strength-of-weak-ties hypothesis.³ This hypothesis says that the employment information from a strong tie is likely to be very similar to the information one already has. On the other hand, weak ties are wide ranging and provide much more crucial information than strong ties and acts as a bridge between two distinct social networks.

However, many scholars find an opposite result, i.e., strong ties are much more effective compared to weak ties (Bian (1997), Krackhardt (1992),

Montgomery (1991), Calvo-Armengol (2000))⁴. Boorman (1975), for example, argues that the rate of unemployment shapes the incentive to maintain a strong tie or a weak tie by a worker in the labour market when he faces a budget to maintain a link. He says that if the rate of unemployment is high then workers tend to maintain more weak links and if the rate of unemployment is low then a worker prefers to maintain strong links only. This literature focuses on the strength of a direct tie and developed their arguments. Zuo et. al. (2014) have examined the strength of an indirect tie on the information diffusion in a network and the speed of forming a new link between the two end players of the indirect tie in the labour market participants. Finally, they have shown that the strength of indirect ties can serve as a predictor for diffusion paths in social networks.

This body of literature focuses on the role of both direct ties and indirect ties to provide employment information. Calvo-Armengol and Jackson (2007) find that both direct and indirect ties are significant to provide employment information and an improvement in the wage or employment status of either an agent's direct or indirect contacts leads to an increase in the agent's employment probability and expected wage.

Since, the strength of a tie matters, the central focus of this paper is to see what kind of ties, i.e., weak or strong, matters the most to provide employment information in the context of an urban formal labour market in Kolkata. I have conducted a primary random and free-flowing questionnaire based field survey on the industry participants, who are mainly employed in the healthcare sector, IT sector, and other service sector, including data analysis, banking sector, education (non-teaching), of Kolkata in 2017. Out of the information that I have acquired through this process, I try to explain the role of friends and relatives as a source of employment information among workers and the role of both direct ties and indirect ties in affecting labour market outcomes. I further explore the strength of a direct tie in this context.

A tie is called a direct tie if there exists a direct relationship between two workers. They may be friends or acquaintances and need not to be employed in the same sector or in the same industry. A tie is called an indirect tie if there does not exist a direct relationship between two workers and they are connected through friends of friends. This paper measures the strength of a direct tie only and the strength is measured by the frequency of interactions between two parties. A tie is called a weak tie if the frequency of interactions is either monthly, or, yearly or rarely and a tie is called a strong tie if the frequency of interactions is either daily or weekly.

The paper finds a strong empirical support in the favour of the strength-of-strong-ties hypothesis. Many job seekers acquire jobs through strong ties. However, acquiring jobs via weak ties cannot be ignored. In addition with that this paper finds that direct ties are important for those who are the newcomers in the urban labour market and indirect ties are important for those who are experienced in the labour market and change their companies more than once to get employment information in the labour markets. The presence of indirect ties indicates that there exists positive network externality in this local labour market of Kolkata and the workers get benefit from this. Among various types of direct ties friendship ties are found to be the most important source of employment information for workers. In addition, the paper also finds the empirical support of evolution of a triad.

The data

Total number of respondents taken for the present study is 211, who are currently employed in different formal service sectors in Kolkata. They mainly work in IT and IT enable sector, healthcare sector including private nursing homes and hospitals, education sector (non-teaching), data analysis sector, banking sector of Kolkata. The respondents include 142 male and 69 female workers. Workers work both in the government sector and private sector. The numbers of workers who work in government sector and private sector are 25 and 186 respectively. The participation rate of female in the work force in this sample is 32 per cent. Respondents are mainly young workers; the average age of the respondents is 30 years. However, the range of age varies from 20 years to 55 years.

Methodology

It is very hard to get sector specific secondary data on the level of employment and employment information or from personal contacts; hence, a random and free flowing questionnaire-based interview process has been adopted to collect the data. The year of data collection is 2017.

Descriptive statistics

Most of the informants are highly educated; 61 per cent of the respondents in the sample are graduate, 24 per cent have done post-graduation, 11 per

cent of the respondents have Higher Secondary degree, and 4 per cent of them have secondary degree. Among 142 male participants 83 (58 per cent) are graduate, and 31 (22 per cent) have post graduate degrees; among the 69 female participants 46 (67 per cent) have graduate degree and 19 (28 per cent) have post graduate degree. Table 1 summarises this.

Table 1: Educational Qualification

Educational Qualifications	Total Workers (in percentage term)	Male (in percentage term)	Female (in percentage term)
Secondary	8 (4)	7 (5)	1
Higher Secondary	24 (11)	21 (15)	3(4)
Graduate	129 (61)	83 (58)	46 (67)
Post Graduate	50 (24)	31 (22)	19 (28)

Source: Primary Data (Sample size is 211)

Table 1 also shows that the female workers in the sample are better educated compared to the male workers. Among 69 female workers 65 (94 per cent) are highly educated having educational qualification equivalent to graduation and above. Among 142 male workers 114 (80 per cent) are highly educated having done graduation or post-graduation.

In this sample, most of the workers are newcomers in the labour market. The average number of labour years of the respondents is 7. There are 3 respondents whose work experience is exactly one year and there are two respondents who are in the labour force for more than 35 years. There are 96 respondents (45 per cent) who are in the labour force for less than 5 years and there are 144 respondents (68 per cent) whose work experience is less and equivalent to 7 years. In this sample, work experience of female workers (7.86 years) is higher than that of male workers (6.81 years).

Table 2 shows that 71.5 per cent (151 workers among 211 workers) have heard about job vacancies through their personal connections, whereas 28.5 per cent (60 workers among 211 workers) workers have used formal sources for searching a job vacancy. The Table shows that the information about low salaried jobs mainly flow via networks, via social ties. The table shows that the low-income group persons, whose annual income is below two lacs, rely mainly on their personal contacts for finding a job. 87 per cent of them have used their social ties for finding a job followed by middle income group workers (72 per cent). The data also show that workers who belong to very high-income group, very high salaried persons, also use their social ties to hear about job vacancies. More than half of them (37

workers among 68 workers) used informal sources of information to hear about job vacancies.

Table 2 further shows that workers who earn a high salary (5 to 9 lacs per annum) use the formal source of information the most (47.1 per cent) followed by the very high-income group workers (41.2 per cent), whose annual income is above 9 lacs. This is because most of them got job via campus placement, mainly joined in data analytics section of data analytics companies like HSBC Analytics, Cognizant etc. and start with a high salary.

Table 2: Source of Employment information (Income group wise)

Income per Annum in Rs. Lacs	No. of Workers	Sex		Average age in years	Employment Information	
		Male	Female		Informal	Formal
Low income group (less than 2 lacs)	75	47	28	28.5	65 (86.6)	10 (13.4)
Middle income group (2 lacs to 5 lacs)	68	49	19	28.33	49 (72)	20 (28)
High Income Group (5 lacs to 9 lacs)	51	32	19	30.25	27 (52.9)	24 (47.1)
Very High income (9 lacs to 15 lacs)	17	14	3	33	10 (58.8)	7 (41.2)
Total	211	142	69	30	151 (71.5)	60 (28.5)

Source: Primary Data (Sample size is 211)

Table 3 shows that workers, irrespective of their gender and sector of employment, government or private sector, used their social ties for finding a job. This is highest in the government sector compared to the private sector. 18 out of 24 workers, who are mainly female, used informal channel for finding a job. These workers are mainly employed in hospitals and earn a low salary.

Table 3: Sources of Employment Information (Sector wise)

Sector	No. of Workers	Male	Female	Used Informal source	Used Formal Source
Government Sector	24	7	17	18	6
Private Sector	187	135	52	133	54
Total	211	142	69	151	60

Source: Primary Data (Sample size: 211)

Table 2 and Table 3 show that workers use their personal contacts for finding a job irrespective of their age, gender, sector, and the income group in the labour market in Kolkata. This indicates that social ties play an important and significant part in accessing employment-related information in the local labour market of Kolkata.

Table 4 shows that personal ties are very important for those who frequently change their companies. The percentage of workers using personal ties for collecting job-related information increases with the rise of the frequency of changing companies. This is maximum (100 per cent) for the workers who have changed their companies thrice. However, it is also important for those who have entered into the job market newly; almost 55.7 percent of them collect employment related information from their personal connections. These workers are mainly experienced workers, who are in the labour market more than 10 years, mainly employed in the data analytics sector, and change their companies on a regular interval. They use their own contacts only to know about job vacancies in different companies. It is evident from this empirical survey that both experienced and fresh workers equally use their connections to hear about job vacancies in the labour market. Therefore, it can be said that social ties are the most important source of employment information for those who change their companies on a regular basis.

Table 4: Frequency of changing companies and employment information

Frequency of changing companies	Total Workers	Average Age	Used Informal Source	Used Formal Source
First Job (Zero Frequency)	104	27.9	58	46
Second Company (Frequency = 1)	72	29.7	62	10
Third Company (Frequency = 2)	30	34.5	26	4
Fourth Company (Frequency = 3)	5	40	5	0

Source: Primary Data (Sample Size: 211)

Therefore, networks matter and workers often use their personal contacts for recommendations and employment information. As networks matter the most the next question is what kind of social ties are important to provide employment information. The next table, Table 5, shows that friendship ties (63 per cent employees use their friendship ties) are the most important source of employment information among various types of personal ties.

Table 5: Various types of social ties used by employees for employment information

No. of workers used social ties	Family ties (percentage)	Friendship ties (percentage)	Friends of friends (percentage)
151	17 (11.2)	95 (63)	39 (25.8)

Source: Primary Data (Number of Observation: 151)

Workers get job related information from friends of friends as well (25.8 per cent). Some workers also used their family ties for getting vacancy related information. Table 5 also shows workers use both the direct ties (friendship ties and family ties) and indirect ties (friends of friends) for hearing job information. The presence of indirect ties in the labour market shows that there exists some kind of positive network externality which allows the information to flow through indirect links. This makes the network stronger and its acts as a safety net in the labour market as it increases the chances of getting more information from multiple sources when required. Better networked people get the job much easily.

As the friendship ties matter the most among other direct ties it is interesting to know how strong a friendship tie is. These friendship relationships are very long - term relationships in nature. The average duration of the relationship is 15 years. They have known each other since childhood or from school or college days. There is a recent trend of making friendships via social networking sites like Facebook and to share job vacancies through them. What they do is that they keep posting job vacancies in their walls whenever they get to know about them. Many potential employees get to know about job vacancies from their friends' walls or friends of friends' walls in Facebook. They share it even and hence information flows in the social networking sites through indirect friends. Ex colleagues, who became friends later, also provided them information about job vacancies (See Table 6).

Table 6: Sources of Friendship ties

No. of workers used friendship ties	School, College, and University	Neighbourhood	Social Networking Sites	Ex Workplace
95	27	12	21	35

Source: Primary Data (Total observation is 95)

The next table, Table 7 shows that the most preferred mode of maintaining a direct relationship (either a family tie or a friendship tie) is through different

types of social networking sites including messenger, whatsapp, etc. However, many of the informants prefer to communicate just by meeting each other. Most of the family ties are maintained by meeting directly rather than communicating over the phone or through social networking sites.

Table 7: Various modes of communication

Social Networking Sites	Telephone	Meet in Person
48	24	40

Source: Primary Data (Total observation: 112)

Most of the workers communicate or interact very frequently; 53 out of 112 workers said that they interact very frequently, on a daily basis and 25 others said that they interact twice or thrice a week either by meeting directly, or by a phone call, or by social networking sites. However, there are workers who interact not so frequently. They interact once a month, and there are some workers who interact with their friends rarely. Table 8 summarises this.

Table 8: Frequency of Interaction

Monthly	Weekly	Daily	Rarely
22	25	53	12

Source: Primary Data (Total observation: 112)

Here, the strength of a tie is measured by the frequency of interactions. What Table 6, Table 7 and Table 8 together show is that the strength of a direct tie is generally very high. As workers mainly use their friendship ties for acquiring information, Table 8 shows that friendship ties are strong in nature. This provides an empirical support for strong-ties-hypothesis (Marco and Goyal 2011) where the strength of friendship ties matter. This guarantees that information flows within the network very quickly and all of the members have the access to the information.

The Tables further show that workers maintain both strong ties, where frequency of interaction is very high as well as weak ties, where frequency of interaction is low. This supports the weak-tie hypothesis (Granovetter 1973; Valery 2005), where workers hear about employment information through weak ties.

In addition to that, the data show that all 151 workers want to return the favour to their friends or family members either by providing employee

referrals or information regarding job vacancies even in the future. 30 of my informants said that they have already returned the favour by providing employment information. They further said that they do it very often not only for those with whom they are directly connected but also for those who belong to their indirect networks, i.e., with whom they are indirectly connected. This implies that indirect links also matter. Here, the benefits flow in both directions, and social networks act as a medium of mutual favour exchange among the labour market participants.

Another important empirical finding is that all the informants want to maintain their personal links in future even though not all of their friends get employed in the same service sector or in the same company. 100 workers said that their friends are not from the same service sector. This indicates that links are stable in nature; no one wants to lose his connections even if the purpose for link formation has been served. This makes networks that are observed in the labour market in Kolkata stable. Workers build networks not only for current benefits but for future benefits as well.

This paper further finds an empirical support behind the evolution of triadic closure, which means if A and B are friends, and B and C are friends, then it is highly likely that A and C will become friends very soon. The data show that 39 respondents who used their indirect ties for getting employment information, 20 of them now become friends. This supports the hypotheses of triadic closure in the literature (Granovetter 1973).

Concluding Remarks

The central focus of this paper was to see the kind of ties that matter the most and to measure the strength of the tie in a section of workers in Kolkata. The paper finds that friendship ties matters the most to provide information among various types of social ties and they are strong enough in nature. However, in this paper, the strength of a direct tie is measured by the frequency of interactions between two parties, not by the duration of the relationship.

In this empirical survey, I have found an empirical evidence of the existence of triadic closures. I have also found that the job seekers want to return the favours that they get from their personal contacts even in the future. Moreover, all of them want to maintain their relationships in the future as well. This implies that social networks, where benefits flow both the ways, are stable in nature. It will be very interesting if the architecture, i.e., who

is connected to whom, of these social networks can be modelled along with their stability properties. It would thus be interesting to conduct a study on the strategically stable network architectures. The most striking finding of the present study is that the workers are guided by a strong sense of reciprocity and mutual help in sharing the job-related information in the social sites, where those who are in direct relations and those friends of friends are members.

Notes

1. See chapter 6 in Goyal (2007).
2. See Section 1 in Montgomery (1991) for a detail discussion. See also Montgomery (1992).
3. See Wegener (1991), and Yakubovich (2005) who find empirical evidences in the support of the strength - of - weak - ties hypothesis.
4. Goyal (2015) finds that strong ties are much more effective than weak ties in a different context.

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