


Employment-oriented Industry Studies

The Job-creating Potential of the Metered Taxi Industry in South Africa's Urban Areas:

Some Preliminary Findings

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HSRC Human Sciences Research Council

employment growth & development initiative

innovative employment strategies

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SOME PRELIMINARY FINDINGS

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1. Introduction

The Employment Growth and Development Initiative (EGDI) is a programme run by the Human Sciences Research Council (HSRC) aimed at developing possible future employment and growth scenario's for the South African economy. This multi-faceted programme has as one of its aims, an analysis of economic diversification and the identification of potential future growth sectors. Identification of these future potential growth sectors is driven by two parameters. First the EGDI is looking for growth sectors which currently exist or could exist within the current growth and development path of the economy. In this way the programme seeks to identify nascent, latent, underdeveloped and potential sectors which with some catalytic action could attain their untapped, true potential. Second, the EGDI is looking for sectors which have a high labour absorption capacity, especially within the unskilled or semi-skilled labour force which characterizes the majority of the unemployed in South Africa at present. With these two criteria in mind the EGDI is conducting preliminary research work on sectors which fit within these two parameters. This proposal considers one possible candidate – the metered taxi sector.

The metered taxi industry fits both the above criteria well. As such this proposal provides a general introduction to the industry and its potential to grow and absorb labour. It is hoped that this introductory note will be sufficient to catalyze a more intensive research and consultation process such that the true potential of the sector can be understood. If the final outcome of this research and consultation process is that the sector could easily generate new employment opportunities, it is envisaged that the project will be taken forward by a delivery department in any of the appropriate spheres of government such that actual employment opportunities emerge from concrete project development and implementation.

2. Definitions and parameters

In order to present this proposal some definitional aspects need to be addressed. In South Africa the most common type of taxi is the minibus taxi or midibus taxi which accommodate 9-18 and 19-35 passengers respectively and who operate on a shared rider basis. These taxis operate either by picking clients up along a predetermined route or from fixed taxi ranks. The minibus taxi and midibus taxi industry dominate the South African road public transport landscape and accounts for 65% of current public transport. (National Taxi Association, 2004) In general this mode of public transport caters for lower income riders who rely on public transport essentially because they do not own private motor vehicles and taxi are more convenient and cost effective than other public transport options (bus and train). Research, policy development and regulation of this sector of the industry are advanced and are NOT the focus of this proposal.

This proposal will rather focus on the non shared (single passenger), sedan based, metered taxi sector which currently accounts for approximately 10% of the taxi industry. (National Metered Taxi Association, 2003) The conventional non-shared taxi market operates in three distinct ways: through direct telephone booking, from specified taxi ranks or by cruising/roving the streets to find passengers.

According to the National Land Transportation Transition Act of 2000 a metered taxi service is defined as:

> *"a means of public transport operated by means of a motor vehicle which is designed, or lawfully adapted, …to carry fewer than 9 seated persons, including the driver, where that vehicle – (a) is available for hire by hailing, by telephone or otherwise; (b) may stand for hire at a rank; and (c) is equipped with a sealed meter, in good working order, for the purpose of determining the fare payable."* National Land Transportation Transition Act of 2000, p. 8; (xxxvi).

While the national legislation allows for metered taxis to be hired either by hailing on the street, waiting at taxi ranks or by phone bookings, Provincial government legislation has reduced metered taxi operators to only waiting at taxi ranks and taking telephone bookings. Hailing a 'roving' or 'cruising' taxi on the street is prohibited at present, as seen for example in the Gauteng Public Passenger Road Transportation Act of 2001. The lifting of this prohibition is being discussed by all stakeholders at present and hence suggests that further research on this sector will find a willing audience.

As will be shown below, future studies of the metered taxi industry will need to consider not only the growth opportunities for the sector under the current legislative regime, but to also consider the potential of the sector if the prohibition on cruising and roving is lifted.

3. The demand for taxi services

The demand for taxi services is highly heterogeneous and differs in developed and developing countries.

In the majority of developing countries taxi are used to supplement often inadequate bus and train based public transport systems and are characterized by shared taxis and low cost single passenger services in motor tricycles or motor quadrucycles (e.g. Tak-taks in India and Bangladesh). These services are demanded by upper lower income passengers who do not own private motor vehicles. This market is usually unregulated resulting in an over supply of services, high competition for passengers and resultant low fares and low incomes for taxi operators.

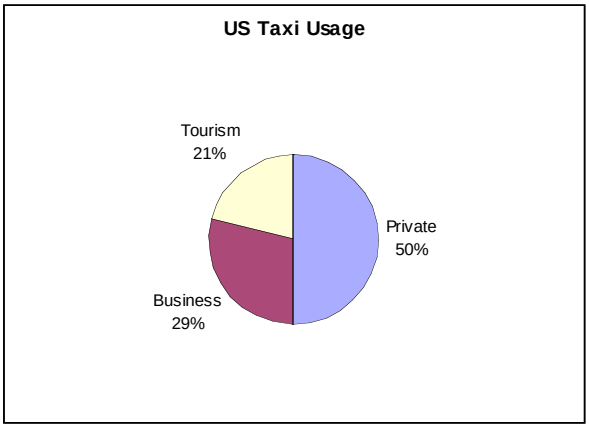
In developing countries taxis tend to be used as a substitute for personal conveyance in a private motor vehicle by passengers who can afford to own a motor vehicle but choose not to; or by passengers who do own a motor vehicle but choose to utilize a taxi service for convenience reasons. In this market taxis tend to operate on a non-shared basis, their supply is limited by legislation and as such they afford taxi operators a reasonable source of income. This is the market we will consider in the urban areas of Cape Town, Johannesburg and Durban.

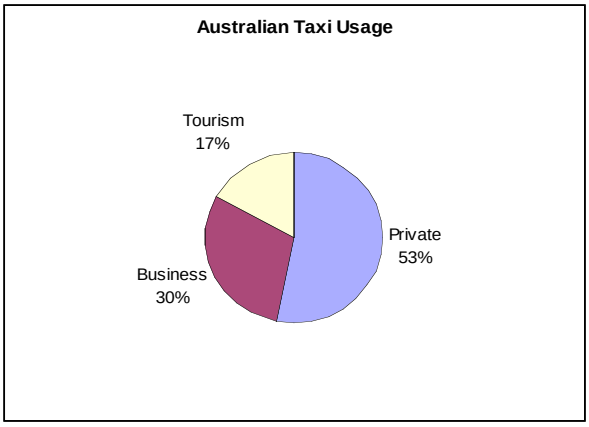
3.1 Target markets

In looking to use international experience to benchmark South Africa's current industry and its potential future growth we have looked at countries with high private motor vehicle ownership but where taxis are still a large growth industry. Countries such as Canada, the US, England and Australia have been chosen. In Melbourne, Australia for example, private car ownership is greater than 90% yet despite this 27 million taxi rides a year were taken generating an income of 400 million Australian dollars a year and creating 21 000 jobs.

Looking at the statistics from these countries it appears as though roughly half of all taxi trips are private, roughly 30% are for business and about 20% are taken by tourists.

Figure 1 – Examples of taxi demand: by customer group





Within the private utilization for city residents (i.e. non-tourists) taxi usage is broadly broken down as follows: 30 % of trips are returning to the passengers home, 15% of trips are conveyance to or from an entertainment venue or event, 5% of trips are to points of departure by train or bus, 5% of trips are for shopping and 2% of trips are to medical appointments. In addition about 2% of usage is by disabled users who are unable to drive.

With respect to tourist usage 30% of trips are to and from the airport, 30% are to visitor attractions and other entertainment, 30% are for shopping and 10% are returning to hotels. No details are available for business usage, but these trips only include taxi rides from the office and returning to the office during working hours. They do not include trips from home to the office or from the office back home as these are captured in private usage.

3.1.1 Demand drivers for residents

Middle- and upper-income resident passengers use taxi services for a variety of reasons. The first and most commonly cited reason is convenience, comfort and

relative speed. This motivation of usage is increased in urban areas where: traffic congestion is high, driving is stressful and parking is limited; or in situations where driving and parking is expensive (congestion taxes and high hourly parking charges). The second main driver of taxi demand is the late evening leisure market in countries with strict drink-driving legislation. In these markets the penalties of driving under the influence of alcohol is sufficiently severe that individuals will utilize taxis as their chosen mode of transport in order to allow themselves to fully enjoy their evening activities. Finally local residents use taxis if they are unable to drive themselves (children/disabled persons) or find other forms of public transport difficult to access due to illness or disability.

3.1.2 Demand drivers for tourists

Non-resident passengers utilize taxis predominantly for ease of use (other public transport systems can be confusing), convenience (no scheduling delays) safety (often other forms of public transport are considered dangerous) and the personal interaction with the driver which a non-shared taxi ride can offer.

3.2 Demand conditions in South Africa

Whereas there exists a culture of public transport and taxi utilization in most developed countries, no such culture exists in South Africa with regard to middle and upper income residents in urban areas. Historically this trend is due to: no culture of public transport utilization or provision, high private motor vehicle ownership, low levels of congestion, high parking availability and low parking costs, low fuel prices and low concentration and densification city planning and development. With respect to the non-resident market (i.e. tourism) until 1994 this was a sufficiently small sector in both relative and absolute terms that it did not provide sufficient demand to meaningfully develop the metered taxi sector.

However, many of these historical factors are beginning to change – such changes could provide the impetus for the further development of a metered taxi industry. First, from a demographic perspective the middle and upper classes in South Africa have grown more rampantly in the last decade than at any previous time in the country's history. This demographic change can be seen in the motor vehicle industry by looking at the composition of the retail bank's motor financing books. Volumes of motor financing have risen 17% per annum for the last 4 years. Between 1994 and 2004 four million black families officially joined the middle class and now account for 38% of all new motor finance. Women's car financing has increased from 13,6% in 2001 to 28.5% in 2004 and 'youth' finance approvals have increased from 19% in 2001 to 42% in 2004. This new emerging middle and upper class are purchasing cars at previously unheard of rates with 725 000 new cars being registered in 2003 and 618 000 new cars being registered in 2004. (Wesbank, 2006) With growth being forecast to continue, this demographic change is resulting in increased car ownership that can be expected to continue increasing.

With increased vehicle ownership comes increased congestion. Increased congestion is measures in a variety of ways, for example the Gauteng Department of Transport measures 45 predetermined routes within Johannesburg and Tshwane and measures average travel times on an annual basis. In the last 2 years travel times on these 45 routes has increased by 33%. Other measures such as volumes on the M1 between Pretoria and Johannesburg show a similar trend with trips a day increasing from 150 000 in 1990 to 600 000 in 2002. (Gauteng Department of Transport, 2006)

A third crucial factor to consider is parking. With the economic growth South Africa's urban centres have experienced in the last decade commercial property development is at an all time high. While new green fields developments are still growing, the majority of urban commercial development has occurred in existing commercial centres, in the redevelopment and revitalization of CBDs and in the conversion of centrally located residential suburbs being converted to commercial use. This increased concentration and densification of commercial property has brought with it increasing pressure on parking provision for developers. Gensec Property also cite the increased trend towards open plan offices as a contributing factor to 'the parking crisis' noting that in an open plan environment there are more employees per square meter than in the traditional office plan. ('No Parking' Sunday Times, March 2006) As a result of this increased demand for parking spaces and increased concentration and densification of commercial property development, Gensec argue that creating sufficient parking via ramps to upper stories or underground parking lots is no longer commercially viable and allocated bays per square meter of rental space are being lowered. In Sandton, for example, where as 6 bays were available per 100 square meters of office space, this has now been reduced to 4. Companies are becoming creative and utilizing shuttle services to take employees to and from public parking arcades but this source of parking is swiftly reaching maximum capacity as well.

Fourthly, car usage is becoming more expensive in South Africa. Fuel prices are increasing, maintenance and repair costs are rising and insurance has increased substantially.

The final demand condition which is changing is the increasing growth in the tourism sector.

If we place all of these factors together and envision these trends continuing for the next 5 to 10 years then it appears as if the stage will be set for the resident demand for metered taxis to increase substantially in South Africa's urban centres. If we add to this the strong growth of the business tourism market, the seasonal leisure tourist market and the ability of the country to attract large events and conferences, then the demand side of the taxi equation begins to look quite optimistic.

4. The supply side

Internationally, most taxi services are provided by companies and individual owner operators. Owner operators dominate the market and few large companies exist in the industry. (Transport Notes, World Bank, 2005) Most often vehicle ownership and operations are fragmented through dispatching groups and radio circuits are more unified and operate at a larger scale. It is also common, particularly in developing countries, for a company or individual to own a vehicle or fleet of vehicles and to charge drivers a fixed monthly rental. In the roving or cruising market owner operators and small companies tend to operate independently, while in the phone booking market owner operators and small companies tend to be affiliated with a centralized dispatching service. This enables operators to utilize their vehicles more intensively and gives customers increased certainty in obtaining a taxi with a short waiting time.

Identifying the correct level of 'supply' is a crucial issue in the taxi industry. As will be seen below supply decisions will depend on whether cruising and roving services are offered, whether telephone booking services are offered or whether both services are offered.

Given the large number of customers and suppliers, prima facie, the taxi market appears to be a classical case of a perfectly competitive market requiring no regulation. In reality this is not the case.

The argument is as follows: In a cruising taxi market, customers typically do not know how frequently a taxi will pass. Moreover, if fares are unregulated and can vary between taxis, passengers will not know whether to accept or reject the first and subsequent fares offered, as there is a fundamental asymmetry of information. In this situation most customers will take the first taxi that stops, regardless of price. Under these circumstances, taxi drivers might not benefit from offering lower fares in hopes of increasing usage. There will be no downward pressure on prices through the taxi hiring process. Moreover, new entrants into the market reduce the number of fares a taxi can obtain (assuming that demand is relatively inelastic to the level of supply). As a consequence, taxi drivers may either end up charging so little that they fail to make an acceptable living or they may increase fares to protect total earnings and eventually potential cut off demand. If fares rise to a level that makes the taxi business seem profitable, more entrants will be attracted. As a result, occupancy rates will reduce, fares will rise further, and the cycle continues.

Fortunately, there are limits to this cycle, especially in areas where several types of taxi services exist. As fares for cruising taxis rise, patrons may begin telephoning taxi companies and comparing rates. In principle, where taxis are required to operate from designated ranks or stands, it should be easier, in theory, for passengers to respond to fare differentials. In practice, however, "first in, first out" conventions at taxi stands undermines the competitive process, making taxi stand systems and prices similar to those of the cruising taxi market.

The direct-telephone taxi market is potentially free from the information failure problem. Customers can shop around to compare fares. This can be facilitated if there is an obligation to publish a fare schedule and quote rates for standard trips. The disadvantages of this system are the time and costs incurred in shopping around, especially if there are many small operators. Therefore, the direct-telephone taxi market tends to be dominated by medium to large companies and dispatch associations. The main risk in this market is that there will not be enough companies in the market for competition to be effective.

Due to these complexities in developed countries the taxi market is almost always regulated. Most countries adopt a liberal approach to regulating fares and entry in the direct-telephone taxi market and a stricter approach with respect to cruising or roving taxis.

In South Africa at present, although the National legislation allows for roving or cruising taxis, provincial governments have prohibited this sector of the market and allow only direct telephone bookings or taxi pick ups at specified taxi ranks. Government established taxi ranks exist, and taxi companies are free to negotiate taxi ranks with individual developers and landlords. In Durban, Johannesburg and Cape Town, most metered taxi companies have been successful in negotiating ranking facilities at the major hotels, at the airport (via ACSA) and with large retailers and mall developers (e.g. the Waterfront in Cape Town and Sandton City in Johannesburg). Despite this the majority of their business is obtained by telephone bookings, although exact data is not available.

5. Taxi regulation

Taxi regulation usually relates to three areas:

1. The quantity supplied – specified in terms of the number of operator and vehicles (usually a medallion system);
2. The quality supplied – specified in terms of the quality of the vehicle, the competence and trustworthiness of the driver and the rules and regulations regarding driver and passenger conduct; and
3. Fares – specified in terms of either fixed or maximum rates.

A fourth regulation which is currently being adopted worldwide relates to tax avoidance, as the industry is prone (being cash-based) to non-disclosure.

With respect to quantity supplied regulations there are generally two dominating concerns. The first is to ensure that serious long-term providers can continue to operate in the market. Informal and illegal entrants into the market and influx of drivers in periods of economic recession mean that the formal sector of serious long-term providers must be protect via regulation. The second concern regarding supply is to ensure that supply and demand are sufficiently aligned to ensure viable revenues for taxi drivers and operators, as well as fares per trip that do not distort the broader public transport system. In many countries taxi congestion is also a concern regarding economic regulation, but this is most often the case in low-income developing countries (e.g. Bangkok, La Paz, Mumbai).

With regard to quality regulation, the greatest concern here is passenger safety as it is not easy for a passenger to easily ascertain the safety and security of taxi services offered. Quality regulation typically covers the vehicle in relation to passenger space, engine capacity, age and condition of vehicle, emissions, safety features, vehicle and driver identification, metering equipment and insurance. In relation to the drivers, regulations often include background checks and prohibitions on illegal aliens and former criminals, medical checks, minimum age and driving experience regulations and adequate geographic knowledge. In addition, regulations often also include: lists of when a taxi driver can refuse transportation of a fare-paying customer (due to unkemptness, intoxication or communicable disease) and when a driver may not refuse transportation (undesirable locations).

Finally with regard to fare regulations, these are commonly applied to protect passengers from exploitation, to ensure drivers are able to earn a reasonable income and to take into account scheduling variations (weekend versus weekdays; day time versus night time). All of these issues will need to be considered if the local industry is to be further developed.

6. Job-creating potential

If this project is to be researched further the key are of interest will be the ability of the sector to create jobs. Various sophisticated elasticity and regression models do exist internationally to determine the optimum number of taxis to supply a given market demand and such an analysis would need to be conducted to determine the full capacity of the industry's potential with some degree of accuracy. Such an exercise is however beyond the scope of this introductory proposal, hence a simpler indicative modelling approach has been used.

In this highly simplified exercise, several short cuts and non-rigorous methodologies to provide an initial indication of the sectors potential have been used. The model is based on the following:

1. We have estimated the potential resident demand market in each urban city by using the number of people in that city who have a tertiary education. This population group has the highest income earning potential and is a good signifier of a middle or upper income person. The data from the 2001 Census was used.
2. The potential tourism demand market has been based on tourists entering South Africa by air, as these tourists are likely to be higher income tourists who may utilize taxis as opposed to rail and road entry tourists. Data is sourced from Statistics South Africa, 2005. The business market has been excluded.
3. We have estimated a ratio of taxis per 1,000 residents based on two data sets. First we have used ratios in line with but below those of Australia's three main cities (see table below). Second we have used the actual number of metered taxis registered in Johannesburg and worked backwards to ensure our starting ratio is approximately correct.
4. We have used the international norm of 4 jobs per taxi to calculate the potential job creation of the industry (see table below).

We have run three scenarios. First we have set up the model with what may represent the current status quo. In reality our model is more conservative and produces fewer taxis and taxi drivers than are currently registered in South Africa. This has been done because we do not have accurate data regarding revenues in the current industry thus we are basing our ratio's on international norms where we know revenues are sufficient to generate a minimum wage earning potential. The motivation for accepting this discrepancy and underestimation is that the aim of the project is to ensure that jobs created are sustainable and provide an income in line with the minimum wage. This under estimation is substantial (45%) and will need to be investigated in detail in further research.

In the second scenario we have assumed that the upper and middle-income class has grown by 10% over a 10-year period based on local economic growth forecasts. In

this scenario only population changes and we assume that there has been no major change in taxi utilization, i.e. no cultural shift. This has been done to isolate the effect of a growing middle and upper class on the demand for taxis.

In the final scenario we have shown a 10 year population growth figure in the potential demand classes as well as a shift of culture, as shown by an increase in the ratio of taxis to population. In this final scenario we assume that marketing campaigns, changing congestion and parking conditions and/or a change in regulation to allow roving taxis or an equivalent change has occurred so that more taxi trips are demanded as shown by a higher ratio of taxis to population.

Table 1 –International data on taxi numbers and jobs created

City	Number of taxis	Direct jobs	Indirect jobs	Total
Manhattan	12,779	42,000	4,000	46,000
Sydney	6,109	22,500	1,400	23,900
Melbourne	4,253	20,000	900	20,900
Brisbane	2,850	12,050	750	12,800
British Columbia (Canada)	2,400	9,600	575	10,175
Average direct jobs per taxi				3.7
Average total jobs per taxi				4.02

Table 1 shows that the taxi industry creates approximately 4 jobs per taxi. This is mainly accounted for by shift work and drivers sharing a single taxi. Most taxis operate on a 24-hour basis allowing for 2 or 3 shifts per day with different drivers for each shift. On the indirect side each taxi also supports indirect or associated jobs of which the biggest category is radio dispatchers and booking centres, followed by managers and supervisors and then workshop and services personnel.

Table 2 – International data on ratio of taxis per 1,000 residents

City	Ratio of taxis per 1,000 residents
Washington	12
Manhattan	8.5
Atlanta	3.8
Boston	3.2
San Francisco	1.8
Houston	1.1
Los Angeles	0.6
Melbourne	1.4
Brisbane	1.9
Sydney	1.7

Table 3 – Scenario 1: Probable status quo scenario in 2006

	Cape Town	Johannesburg	Durban
Potential resident taxi user demand base	319,129	756,706	348,744
Potential tourism demand base	50,000	109,000	10,000
Ratio of taxi per 1000 user population	1.3	1.3	1.3
No. of taxis	480	1,125	466
Jobs per taxi	4	4	4
Total number of jobs	1,919	4,502	1,865

This scenario is conservative in the extreme as the Gauteng Metered Taxi Association claim that there are 1,860 metered taxis in Johannesburg. If we utilize this to determine the ratio of taxis per 1000 population the ratio is as high as 2.5, which appears to be out of line with international norms and common sense observations. This base scenario will obviously have to be investigated further to determine the actual ratio and to better align it with known data on drivers and vehicles. The base model would also be more representative if it included tourism demand and business demand.

Table 4 – Scenario 2: Forecast in 2016 if no culture of taxi use is developed but the demand increases due to population increases

	Cape Town	Johannesburg	Durban
Potential taxi user demand base	351,041.9	832,376.6	383,618.4
Potential tourism demand base	5,0000	109,000	10,000
Ratio of taxi per 1000 user population	1.3	1.3	1.3
No. of taxis	521	1,224	512
Jobs per taxi	4	4	4
Total number of jobs	2,085	4,895	2,047

In this scenario we have assumed that there is a population growth of 10% in the target market of potential taxi users. This figure matches the 10% increase in the upper income class since 1994 and is based on an assumption that the economy will grow at roughly the equivalent rate between 2006 and 2016 as is did between 1994 and 2004. As the table above indicated, merely growing the potential market demand will not have a strong growth impact on the sector and it's job creating potential, if such growth is not accompanied by a change in the culture of using taxis.

Table 5 – Scenario 3: 2016 if culture of taxi use is developed

	Cape Town	Johannesburg	Durban
Potential taxi user demand base	351,041.9	832,376.6	383,618.4
Potential tourism demand base	50,000	109,000	10,000
Ratio of taxi per 1000 user population	1.9	1.9	1.9
No. of taxis	762	1,789	748
Jobs per taxi	4	4	4
Total number of jobs	3,048	7,154	2,991

In this scenario we have assumed a 25% increase in ratio of taxis per 1000 residents which indicates an increased acceptance of taxis as a substitute for private motor vehicle usage and hence a change in the culture of taxi utilization. Comparing the outcomes of this scenario to scenario 2, we see that market usage is a greater driver of increased taxi activity and job creation than mere increases in the market size. Increased utilization could occur due to current traffic conditions worsening, positive marketing and education, changing regulations to allow for roving taxis or changes in other forms of public transport (e.g. Gautrain).

7. Skill requirements and labour characteristics

The basic skills required to drive a taxi include only basic literacy (necessary to obtain a drivers license and read maps books and road signs) and a valid drivers certificate. In many countries where the taxi industry is dominated by immigrants, basic fluency in English (or the appropriate language of the country) is also required.

The industry is dominated by male drivers, while the support industry staff to metered taxis – call centres and radio dispatchers – are dominated by women. Women comprise only 2% of taxi drivers in the USA and 1.4% in Australia.

The average age of a taxi driver in the USA is 44 and in Australia is 37. On average, the mean amount of driving experience for a taxi driver in the US and Australia is 7 years. Data collected shows that more experienced drivers have fewer accidents and fewer complaints and traffic violations against them than more inexperienced drivers.

In America, records of the places of residence of taxi drivers shows a strong correlation of taxi drivers living in low income areas in major cities, suggesting that taxi driving as a job opportunity is most often taken up by low income labourers from poorer communities.

90% of taxi drivers recently interviewed by the World Bank survey on the taxi industry see their employment in the industry as a permanent decision, while 10% of taxi driver state that they are driving a taxi until something better comes along. This latter percentage rises substantially during times of recession where workers see taxi jobs an interim measures until the economy picks up again. 40% of taxi drivers have another job to supplement their taxi income.

In the US taxi shifts average out at 10 hours a shift while in Australia shifts are limited to 8 hours. In New York City the average income for a driver per shift is $158, while in Australia the average income per shift is AU$64.

Taking all of these factors together we can infer that based on international norms and indicators, employment in the taxi industry could absorb male labour living in poorer areas, with no skills other than basic literacy and driving skills in a permanent capacity at a wage rate which would be low but above the minimum wage.

8. Conclusions

The aim of this introductory paper has merely been to stimulate thinking around the potential of the metered taxi industry to grow in South Africa's major urban centres and for that growth to result is moderate sustainable job creation at a reasonable wage rate. Moreover, this sector has the potential to create job opportunities which better match the skills profile of the existing unemployed than many other sectors where the skills supply and skills demand is substantially mismatched.

Summarizing the key points in this paper we see that, although there exists no culture of metered taxi usage at present amongst the potential target market, increased traffic densities and city densities suggest that this latent demand may become effective demand in the near future with no outside intervention. Further the growth of the potential target market suggests that if or when such a transport shift arises the demographic and income numbers will support effective demand for these services.

On the supply side, we see that this sector is biased towards owner operators and smaller companies suggesting a good fit with the country's SMME and BEE policies. In addition the skills required to participate in the industry are low.

Finally, while the indicative modelling numbers used in the model are conservative a potential 13,000 jobs (or 26,000, using existing taxi numbers) may be created at minimum cost to the country. In addition the model did not take into account business demand or demand from disabled persons. Very importantly the model does not take into account the potential of the market in Gauteng once the GauTrain begins operating. This project will probably warrant an individual study, as it may be a catalyst for changing resident perceptions of public transport and the role of metered taxis.

The final point to be made is that seldom is a country with high unemployment rates offered an opportunity to generate jobs with little effort and little cost. The metered taxi industry offers such an opportunity. Latent demand may grow to be effective demand through the natural process of developing urban centres and their inevitable problems of congestion and parking. However it is possible that such growth could cost effectively be harnessed in a more proactive manner by simply changing the regulatory environment and educating and marketing the concept of metered taxis to the target market.

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